DOCUMENT RESUME

ED 108 294 EA 007 207

TITLE	Education in OECD Developing Countries: Trends and Perspectives.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France).
PUB DATE	74
NOTE	296p.; Best copy available for reproduction
AVAILABLE FROM	OECD Publications Center, Suite 1207, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006 ($8.00)
EDRS PRICE	MF-$0.76 PLUS POSTAGE. HC Not Available from EDRS.
DESCRIPTORS	*Developing Nations; Educational Assessment; *Educational Change; *Educational Development; Educational Policy; Elementary Secondary Education; Evaluation Criteria; National Surveys; Post Secondary Education; *School Statistics; Statistical Data; *Tables (Data)
IDENTIFIERS	Greece; OECD; Portugal; Spain; Turkey; Yugoslavia

ABSTRACT

A major purpose of this publication is to describe and analyze educational development during the 1960s in the developing countries that are members of the Organisation for Economic Co-operation and Development (Greece, Portugal, Spain, Turkey, and Yugoslavia). On the basis of this analysis, an attempt is made to assess anticipated changes in the educational systems of those countries during the 1970s and to identify priority areas of concern in planning long-term educational development policies. Extensive tables of educational data are presented to serve both as indicators of the present level of educational development and as a statistical framework for periodic reviews of educational progress in the developing OECD countries. Because directly comparable data were not always available for all the countries, the tables may be more useful for the study of educational development in each individual country than for comparative purposes. (JG)

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EDUCATION IN OECD DEVELOPING COUNTRIES

TRENDS AND PERSPECTIVES

(Best Copy Available)

EA 007 207

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
Paris 1974

The Organisation for Economic Co-operation and Development (OECD) was set up under a Convention signed in Paris on 14th December, 1960, which provides that the OECD shall promote policies designed :

- *to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;*
- *to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development;*
- *to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.*

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PRICE F32,000 £3.20 $8.00
(91 74 07 1) ISBN 92-64-11244-8

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PREFACE

In the framework of its activities, OECD has maintained a special interest in the growth problems of its developing Member countries.(1) In spite of the progress they have achieved over the last two decades, these countries continue to share some distinctive features of weakness in their economic and social structures by comparison with some of the more industrialised Member countries.

The relatively low income per capita (among the lowest in Western Europe) and the regional and social disparities within these countries make for large population groups which enjoy only limited opportunities for education; conversely, the limited capacity of their societies to adapt to changing structures, modern technologies and institutional requirements, due to their low level of educational attainment, remains one of the principal constraints on accelerated social and economic progress.

A first systematic approach to the problems of educational growth in the developing Member countries was attempted some ten years ago within the framework of the OECD Mediterranean Regional Project. As a pioneering activity in the field of education, the MRP stimulated significant policy decisions and further educational planning and research in these countries.

Under conditions of continuing demand pressure for educational services in a climate of a more general process of economic, social and technological change, the developing Member countries are now faced with the need to renew their efforts for educational development and undertake drastic reforms of their educational systems. In this context, it was felt that it would be useful to attempt an analysis and evaluation of the progress realised towards educational objectives as defined in their development plans, as well as an assessment of major changes in the structure of the educational systems

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1) Greece, Portugal, Spain, Turkey and Yugoslavia, the last as associate Member.

during the 1970s, as a basis for suggesting priority areas of general policy concern in the future. The results of this effort, undertaken by the Secretariat under the programme of the Education Committee, are presented in the report that follows.

The approach adopted for this study was based on a global model of quantitative analysis allowing for an overall review of educational developments. To achieve this purpose, a special effort was made to build up a minimum body of basic statistics. The deficiencies in the available information are pointed out in the report, in this way indicating priorities for future statistical work.

This report has been prepared by the Secretariat, with generous help from the national authorities of the countries concerned in providing and supplementing data and information on which the analysis was built. Within the Secretariat, the work for this study was carried out by Constantine Doussis, assisted by Jacques Naturkrejt in the collection and tabulation of the statistical data.

INTRODUCTION

Scope and Aims

Since the Washington Conference in 1961 and the Mediterranean Regional Project, the developing Member countries (Greece, Portugal, Spain, Turkey and Yugoslavia) have witnessed a rapid rate of educational growth. There is some doubt, however, whether the capacity of their educational systems, which was described as modest in the MRP reports, has grown sufficiently to ensure that educational standards have been maintained and improved, and that the systems themselves will develop smoothly in the future.

The general purpose of this review is first to describe and analyse the educational development in these countries during the 'sixties: secondly, to assess approximately the magnitude of the growth problems which are likely to arise during the next decade because of the increasing demand for educational services. The basis on which this review has been prepared could also lead to the establishment of a broad framework for periodic reviews of growth in education, relating it to other objectives of development policies. Such reviews, which would enable a rapid assessment of the situation in the field of education to be made, are now necessary because of the rapid and continuous educational growth which is taking place within the overall process of social and economic change. They could facilitate the discussion of major policy issues, and help determine which are the most important areas for research, improvement and innovation. Finally, they could usefully compare the problems, achievements and policies of the Member countries concerned and help determine common fields of interest.

More specifically, the purpose of the present review is:

- to evaluate the achievements of the past in relation to educational goals and to discuss the present conditions for educational development;

- to analyse the factors which have conditioned educational development and also the effects on these developments of educational policies;
- to consider how the Member countries are envisaging the future of their educational systems in terms of the re-evaluation of the overall goals of their development policy and the relevant re-allocation of resources among the various social and economic sectors;
- to consider their specific targets or forecasts for educational development for the next ten-year period (as against the present situation) in relation to what they have achieved in the past, their actual capacity and the resources they need and can mobilise over this period for further educational expansion;
- to examine the policies proposed for influencing the rate and type of educational expansion in the desired direction, according to the goals for educational development.

The need to examine concurrently the development of educational planning and the means for implementing it at all levels -- national, regional, institutional -- and the establishment of special institutions for preparing the necessary reforms for the application of innovations in the field of education have given rise to a series of special projects undertaken within the framework of the OECD activities, in cooperation with the developing Member countries.

The Problem of the Availability of Educational Statistics

Studies of a synthetic nature require a wide range of information in the form of either basic statistics and indicators or specific studies illuminating some important aspects of the development and operation of the system (such as studies on regional and social disparities, student preferences, cost studies, etc.) Unfortunately, very little interrelated data, collected regularly by competent agencies on an annual or longer period basis for use in preparing growth reviews, is available. Some useful statistical work of this kind has been done in the past, but only for specific reviews or studies.

For the purpose of this review, in addition to using existing material, attempts have been made to collect further data. Thus, a questionnaire was drawn up to provide a structural framework for collection and presentation of statistical information with the two-fold aim of ascertaining educational progress in the developing Member countries and of working out a simple model of quantitative estimates of a number of variables of the educational system as a basis for decision-making at the general policy level:

- one set of tables refers to what could be considered as a minimum of basic data which to be useful must allow for a number of basic interrelationships to be produced. For example, enrolments in primary education have to be related to the corresponding number of teachers and/or to the corresponding expenditure for primary education;
- another set of tables has the purpose of providing the necessary information for following up the flows of students and the changes in the pattern of educational expansion;
- finally, the tables referring to the enrolment ratios, the occupational structure of the labour force, regional disparities and father's occupation aim at giving some very general indications as to educational progress in relation to the general objectives of the educational development policies.

To facilitate the statistical work, the OECD Secretariat filled in the tables insofar as possible from the annual reports available to the Organisation and other published material. The tabulations for each country were then sent to the national authorities concerned for completion. In the light of replies, additional information and comments, each was revised in the final form in which it appears in Appendix I. However, in many cases, the statistical gaps do not permit as thorough a description or study of specific problems as would have been preferable in a report of this kind. Until an effort has been made at the international level to adopt a more generalised and standardised system of statistics for evaluating the performance of educational systems and forecasting educational developments, the lack of regularly supplied, basic information will continue to be felt in important areas in the elaboration of educational development plans and policies.

Chapter 1

THE GENERAL FRAMEWORK OF EDUCATIONAL DEVELOPMENT POLICIES

SOCIAL AND ECONOMIC BACKGROUND

Among the OECD Member countries, Greece, Portugal, Spain, Turkey and Yugoslavia continue to present some of the features of countries in the process of development. Notwithstanding the progress registered over the last two decades, their income per capita is still much lower than that of the other Western European countries. The number of people employed in agriculture and in the processing, transport and marketing of agricultural products is very large. On the other hand the agricultural sector's relatively small share in the domestic product reveals the low productivity levels of the sector. Since the bulk of industrial and tertiary activities is concentrated in a few development centres, the low productivity in agriculture leads to wide income disparities among the various regions. Thus, the rural areas where a high proportion of the population lives are characterised by extensive under-employment and poor living standards. But even in the cities, in industry and the tertiary sector, the presence of a considerable number of small, non-competitive units is still evident.

Table 1 shows the GNP per capita, the structure of the GDP and that of the labour force for the developing countries as well as for other selected OECD countries. By comparing these figures an indication can be obtained of the gaps which exist between the countries.

In addition there are other economic and social indicators which reflect inadequacies in many sectors; these imply the long-term nature of the problems faced by these countries and underline the need for important changes in their social and economic structure in the future.

Among the most serious deficiencies hindering the development of these countries and accentuating regional disparities

Table 1

GNP PER CAPITA, STRUCTURE OF GDP AND OF THE LABOUR FORCE (1968)

Country	GNP per capita(1) (U.S.$)	Percentage contribution to GDP			Percentage breakdown of total employment		
		Agriculture	Industry	Services	Agriculture	Industry	Services
Greece	860	21.2	27.3	51.5	50.1(2)	21.2(2)	28.7(2)
Portugal	530	19.0	42.2	38.8	32.3	36.2	31.5
Spain	770	16.3	33.7	50.0	29.4(2)	36.6(2)	34.0(2)
Turkey	350	33.8	26.5	39.7	72.7	11.4	15.9
Yugoslavia	450(2)	22.7(2)	40.8(2)	36.5(2)	..	..	..
Other OECD Countries							
Italy	1 390	11.1	38.6	50.3	22.5	41.8	35.7
France	2 530	6.6	47.8	45.6	15.8	40.4	43.8
Germany	2 200	3.9	50.9	45.2	10.2	48.2	41.6

1) At current prices and exchange rates.

2) Year 1967.

Sources: OECD Observer, February 1970 and Economic Survey, 1969, for Yugoslavia.

within them is the lack of an efficient economic and social infrastructure (communication networks, irrigation systems, electricity supply, education, housing for low-income groups, health facilities, etc.). Similar deficiences are also found in the field of scientific research which lacks the necessary government departments and other institutions and to which only a negligible amount of resources is devoted.(1)

The total population of the five countries together in 1966 amounted to 101,729,000 (or 27.3 per cent of the European OECD Member countries' total population, including Yugoslavia). As shown in Table 2, it increased at a rate of 1.4 per cent per year over the period 1955-1966. Turkey alone, however, was responsible for 56.1 per cent of the increase.

Emigration and urbanisation movements, which were accelerated in the early sixties, may be largely explained by weaknesses in the economic and social structures of the five countries. All of them are more or less "emigration regions". In Greece, Portugal and Spain, the emigration movement has caused a serious decline in the birth rate and in the rate of population increase. It has also resulted in a reduction in the proportion of young age groups in the total population and has had an unfavourable effect on the qualitative structure of the labour force.

In Turkey, despite emigration, the rate of population increase has been so high that the present policy of the government, as defined in the Turkish Development Plan 1968-1972, is to improve the structure of the population and reduce its rate of increase. An important demographic characteristic in this country is the very high proportion of children in the total population (41.2 per cent in 1960).

In Yugoslavia, high birth rates prevail mainly in the rural areas. This country is also characterised by a high proportion of children in the total population; it ranks second among the developing Member countries, with 31.1 per cent of the total population under 15 years of age (Table 2). This proportion is still among the highest in Western Europe.

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1) An extensive description of the structural social and economic problems of the developing Member countries can be found in their development plans, which constitute the most important source of official information for this report, and in the OECD Economic Surveys for each country. See also The Growth of Output 1960-1980, Chapter IV, "Developing Countries". OECD, 1970.

Table 2

BASIC DEMOGRAPHIC DATA

Country Demographic data	Greece	Portugal	Spain	Turkey	Yugoslavia	Total	European OECD(6)
Total population (in 000's)							
1955	7,966	8,610	29,056	24,065	17,586	87,283	332,500
1956	8,614	9,335	31,871	32,174	19,737	101,731	372,600
Average annual rate of natural increase	1.1	1.2	1.2	..	..	..	0.8
Average annual rate of increase after migration	0.7	0.7	0.8	2.7	1.1	1.4	1.0
Population by age (% of total) in 1960							
Under 15 years	26.1	29.1	27.4	41.2	31.1(1)		
15-64 years	65.8	62.9	64.3	55.1	62.6(1)		
65 years and over	8.1	8.0	8.2	3.7	6.3(1)		
Urban population (% of total)							
Year 1950	36.8(2)	19.4	52.0	18.5	18.5(3)		
Year 1960	43.3(1)	22.7	57.2	26.3	28.5(1)		
Average annual population growth rates (1950-1960)							
urban	2.60(4)	2.10	1.75	6.55	6.65(5)		
total	0.95(4)	0.55	0.85	2.85	1.10(5)		

1) Year 1961. 2) Year 1951. 3) Year 1953. 4) Period 1951-1961. 5) Period 1953-1961.

6) Including Yugoslavia.

Sources: a) The population data, with the exception of Yugoslavia, were taken from the OECD publication Labour Force Statistics; for Yugoslavia, from the U.N. Demographic Yearbooks.

b) The urbanisation ratios for Greece, Portugal and Yugoslavia were taken from the U.N. Demographic Yearbooks; for Spain and Turkey, from their development plans.

With the exception of Spain, the majority of the population in these countries lives in rural or semi-urban areas. The rate of urbanisation, however, was quite rapid over the decade of the fifties, as the figures in Table 2 show.

It might be said that among the five countries Spain is the only one with a sufficient number of "urban" centres (31 towns with a population of over 100,000 inhabitants). In Turkey, which has about the same population as Spain but only 14 towns of over 100,000 people, the urbanisation rate is extremely high. In Yugoslavia, the rapid increase in urban population ran parallel to some extent to the effort to promote industrialisation in the country; regional disparities, however, are still very large. In Greece and Portugal, where the urbanisation rates are lower than in Turkey and Yugoslavia, the main problem appears to be one of over-concentration in the capitals.

In the post-war period the five developing Member countries have undertaken sustained and co-ordinated efforts to accelerate their social and economic development. Between the years 1955-1968 they attained growth rates higher than the OECD average for the same period.

Table 3

TREND RATES OF GROWTH OF OUTPUT (1955-1968)

Annual average rates

Country	GDP	Agriculture	Industry	Services
Greece	5.9	2.9	8.7	6.2
Portugal	5.4	1.3	8.6	5.3
Spain (1)	7.0	2.7	8.4	5.7
Turkey	4.9 (2)	2.6	6.3 (3)	6.7 (3)
Yugoslavia (4)	5.4	2.9	6.0	6.7
European OECD	4.8	..	..	..

1) Period 1958-1968.
2) Net domestic product.
3) Electricity, gas and water are included under services.
4) Comparable data are not available. Growth rates are for the period 1964-1969 and are based on Yugoslav definitions and concepts of social product (social and private sector).

Sources: The Growth of Output 1960 - 1980, OECD, 1970.
Economic Survey for Yugoslavia, OECD, 1972.

In Table 3, the growth rates of the three major economic sectors reflect clearly the structural changes which are taking place in the economies of these countries. Industry is expanding at a much faster rate than agriculture, of which the share in GDP is continuously diminishing in favour of the other sectors.(1) This development, in conjunction with the rapid urbanisation movement, shows clearly that the five countries are in a stage of rapid transition from an agrarian to a more diversified economy and to a new social structure.

The changes in the patterns of consumption, as well as the need for these countries to ensure at the same time an increasing participation in the world economy, add to the need for the restructuring, modernisation and expansion of their productive capacity and for the application of new methods of organisation. Parallel to this, with rising incomes and changes in social structure the demand for social services such as education and health is becoming more pressing. The economic and social problems arising from the movement of population to development centres call for increasing and special attention, especially in the direction of:

- providing employment in the cities at a rate high enough to absorb the additional labour force coming from the villages;
- expanding the social and economic infrastructure of the cities accordingly (educational facilities, housing, water supply, etc.);
- providing for the education and training of rural workers to enable them to work efficiently in their new occupations;
- ensuring a balanced development of all regions to avoid over-concentration in one or more big cities.

All five countries are implementing development plans; target growth rates for output are set as high as 8 per cent per year for Greece, 7 per cent for Portugal and Turkey and

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1) In Greece, the share of agriculture in GDP fell from 33.2 per cent in 1950 to 27.9 per cent in 1965, in Portugal from 33.3 per cent to 21.1 per cent and in Turkey from 48.8 per cent to 39.0 per cent.

5.2 per cent for Spain.(1) In Greece and Portugal, relatively greater importance is attached to improvement in productivity than to increase in employment. The annual growth rates of employment envisaged are 1 per cent in Greece and 0.3 per cent in Portugal, as against an increase in productivity of 7.0 per cent and 6.7 per cent per year, respectively. In Spain, employment is expected to rise by 1.3 per cent and productivity by 3.9 per cent per year. In all plans, measures have been adopted for the re-distribution of income through an increased participation of lower-income groups in the increase of GNP, not only by means of salary policies but also those aimed at the development of the social sectors (education, health, etc.) and of the backward regions.

To achieve these objectives, the developing Member countries have to face a variety of problems which are not necessarily of the same type or magnitude in all of them. A typical example is that of savings. According to the development plans, only Spain seems to require a modest increase in the share of savings to GNP; Yugoslavia already spends a very high proportion of its product for investment (Table 4).

The balance-of-payments situation reflects some of the structural weaknesses of the developing Member countries, mainly the limited capacity of their products to compete in international markets

Table 5 shows that only Portugal has a balance-of-payments surplus large enough to finance an ambitious development policy in the next few years from her own resources. The other four countries will still need substantial external resources to finance their development plans, though they all hope to achieve a rate of exports high enough to counterbalance increased imports and thus reduce dependence on foreign finance.

During the sixties, all the developing Member countries drew up long-term development plans, some of them for the first time, to deal with the great number of growth problems facing them. They have done so because they recognise the need to view these problems within a comprehensive long-term perspective rather than piecemeal, as in the past.

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1) The growth target in the Yugoslav Plan 1966-1970 was 7.5 per cent to 8.5 per cent per year. The Yugoslav authorities are now preparing a new plan for the period 1971-1975 with the same growth target.

Table 4

SHARE OF SAVINGS TO GNP

Countries	Period of Plan	Per cent of Savings to GNP	
		Year 1967	End of Period
Greece	1968-1972	21.8	26.2
Portugal	1968-1973	19.8(1)	22.7(1)
Spain	1968-1971	21.0	22.5
Turkey	1968-1972	19.0	23.0
Yugoslavia(2)		30.7(1)	..

1) Represents fixed asset formation and change in stocks.
2) Source: Economic Survey of Yugoslavia, OECD, 1972.
Source: Development Plans.

Table 5

BALANCE OF PAYMENTS - TRADE AND CURRENT BALANCE (1967)

Millions of dollars

Country	Trade Balance	Services and Transfers	Current Balance
Greece	-697(1)	475	-222
Portugal	-247(2)	414	+167
Spain	-1,781(2)	1,316	-465
Turkey	-162(1)	46	-116
Yugoslavia	-432(1)	300	-132

1) Imports c.i.f.
2) Imports f.o.b.
Source: Economic Surveys, OECD, 1969.

This development is bound up with important institutional changes which will affect the way in which goals are set and decisions taken and which, presumably, will influence policy planning as well.

Today the educational planner has more information at his disposal on the socio-economic environment within which educational activities are developed. Growth targets, changes envisaged in the social and economic structures, demographic evolution, urbanisation movements and social and political considerations all constitute the background necessary for orientating the long-term educational policies and for developing the appropriate strategies to attain the educational targets.

At the same time, a comprehensive approach to growth problems provides a structural framework within which the nature and role of education as a factor of social and economic growth can be recognised. It follows that the magnitude of the effort and the resources to be allocated to meet the needs in one sector will ultimately be determined with respect to the relative importance of other social and economic needs.

OBJECTIVES OF THE EDUCATIONAL DEVELOPMENT POLICIES

In the framework of the development plans now being implemented in all five countries, special emphasis is given to education in conjunction with the overall social and economic goals. The objectives of the long-term educational policies are clearly defined; and the action to be taken during the medium-term period covered by the plans is described in some detail in terms of educational reforms, educational growth rates and resources allocated for educational development.

All five plans point to the need to ensure a rapid rate of educational growth in response to the aspirations of society and individuals for improved educational levels.(1) The State, as the main provider of educational services, assumes the responsibility of supplying the means that the educational system will need if it is to expand.

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1) According to the Portuguese Development Plan (p. 458, para. 9), "The main objective of educational policy, which dominates all other objectives, is the intensification of the effort to generalise education and improve its quality and effectiveness". (Footnote continued on next page)

In Yugoslavia all education is provided directly by the State, but in the other four countries private schools, operating under government control, provide additional educational facilities.

Most of the plans provide for investment programmes for buildings and equipment, and also for increasing the number of teachers who will be required for the increasing number of pupils expected. However, the attainment of a high rate of educational growth is not the only objective of the educational development policies. The problem is not just to ensure rapid overall increases in the numbers of children at all levels of education. Several other aspects of the educational expansion have also to be taken into consideration.

Thus, in all five countries it is generally recognised that planning on the national scale is not sufficient and that educational policies should, at the same time, aim at reducing regional disparities in educational participation. The adjustments necessary to ensure the proper re-distribution of educational activities among the various regions are provided in the educational programmes.(1)

Footnote continued from previous page.

The Spanish Development Plan emphasises that "In order to give full force to the basic principle of ensuring every Spaniard the right and obligation to receive the education required to qualify him, individually and socially, within the limit of his abilities and up to his maximum potentialities, the diffusion of education to larger numbers of people will continue to be favoured, while taking all appropriate steps to ensure that this necessary extension is not achieved at the cost of a reduction in the standard of education provided". (p. 135)

According to the Turkish Plan (p. 175), "The purpose of education is to enable people to know their environment, to react rationally, to adapt to the structural changes of society, and to acquire the ability to increase both their personal prosperity, happiness and moral values and that of their environment through the knowledge and skill they acquire".

The Greek and the Yugoslav Plans also emphasise the importance of education for both social and economic development.

1) The Portuguese Plan provides for "the extension of the school network ... in a way to increase the number of educational establishments and to distribute them over the country on the basis of the best criteria of regional development of education".

(Footnote continued on next page)

In most of the plans, the objective of equalisation of educational opportunity is clearly set out.(1) In educational development policies the provision of scholarships is the most commonly adopted measure to meet this objective. In addition, other means of financial support are also proposed in some of the plans (e.g. the granting of loans). In most of the countries, policies to extend the compulsory education period were

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The Greek, Spanish and Turkish Plans, within the framework of their regional development policies, regard education as a means of promoting the various regions and therefore they provide for an adjustment of their educational policies to take into account geographical diversities. Special attention will be given to the establishment of new universities and higher technical schools in various geographical areas.

Started within the framework of the 1966-71 Yugoslav Development Plan, a radical reform aimed at decentralising the educational system is taking place. According to the reply of the Yugoslav authorities to the OECD Educational Growth Enquiry, "The main competence, not only for education policy but also for the operation of the education system, lies with the Federated Socialist Republics, as self-governing political territorial units, and with the socio-political and working institutions of citizens. All educational legislation is first discussed at this level, thus associating citizens and workers with the decision-making process."

1) The Portuguese Plan states as an objective of the educational policies "to develop social action in education ... to favour studies beyond compulsory education to all children who have the capacity to do so, independently of their economic conditions".

The Spanish Plan provides that "The present system of aid to students will be improved, and will be supplemented by the introduction of personal loans, to be repaid as and when possible out of the student's subsequent earnings. Such assistance will be increased in line with the objectives laid down in the present Plan for the diffusion of education at various levels, in such a way that access to education will increasingly depend upon the intellectual capacity of the individual, rather than upon his own or his family's financial resources. These aims will also be served by promoting the construction of halls of residence and of senior and junior colleges for students from population centres remote from the seat of the main educational establishment."

The Turkish Plan states that "The possibility to take advantage of the State-provided educational facilities beyond the primary level will be secured according to the principle of equality of opportunity. Accordingly, with the aid of scholarships and boarding schools the capable students will be allowed to obtain the highest levels of education without being hindered by economic difficulties and unfavourable environmental conditions."

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supported by the provision of free meals and teaching materials to encourage low-income families to send their children to school.

All five plans emphasise the importance of education in relation to economic development goals. It is a constant concern in these countries that the shortage of skilled labour well-educated in modern technology is one of the principal hindrances to their achieving faster rates of economic growth.(1) The developing Member countries are facing serious problems in their efforts to accelerate the desired changes in the manpower structure and to improve the pattern of qualifications of the labour force. All plans envisage severe reductions in farm labour with subsequent rises in the urban population and in employment in the non-agricultural sectors.

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The Greek and the Yugoslav Plans do not refer to the principle of equality of educational opportunity, but in their answer to the OECD Educational Growth Enquiry, the Greek authorities state that an objective of the Greek educational policy is the "provision of education to the largest possible number with a simultaneous effort to secure equality of educational opportunity"; the Yugoslav authorities state that a special educational goal is "to provide full access to education financed by the community for all Yugoslav citizens, regardless of their financial means, in accordance with the general laws of the Yugoslav social community".

1) According to the Greek Development Plan, "To raise the level of education and technical skill of the labour force is an essential condition for attaining the planned high rate of increase in productivity, and it is the basis on which long-term development of the economy will rest".

In Portugal, an objective of the educational development policy is "to adapt the educational system to the requirements for qualified personnel" (Development Plan, p. 169, para. 21).

According to the Spanish Plan, "Education should be a continuing process throughout active and working life, to allow the full development of every side of the individual's personality, especially in the case of those who were unable to attain intermediate and higher levels of education, while at the same time ensuring that professional workers can keep abreast of scientific and technical innovations. A national system of occupational and further training for the population is an absolute necessity, to provide workers with legitimate opportunities of improving their social status and to prepare the ground for economic development."

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The economic progress that the five developing Member countries have made so far has contributed to reducing somewhat the gap between them and the developed countries, and provides the basis for achieving high rates of growth. However, the margins for development in the past were large enough to allow economic expansion to take place even with the old patterns of production and organisation. Now that such margins of development are almost exhausted and these countries have a more diversified type of economy, it is becoming more and more evident that policies for the development and better utilisation of human resources will be a key factor for sustaining high rates of growth in the future. Such policies are all the more important in view of the rapid technological evolution in the developed countries and the trends which can be observed in the latter towards a generalisation of education at higher levels.

Thus, the development requirements for qualified manpower will have an important influence on the decisions taken about the rate and type of educational expansion. To meet these requirements a number of changes are planned: secondary technical education is being rapidly developed higher education is being developed to accommodate a higher proportion of students of science and technology; non-univeristy level higher education is being expanded. Similarly, non-formal education (adult education, on-the-job training, accelerated vocational training) is also acquiring a growing importance.

In addition to the above objectives, several other important directives for long-term educational policies are stated in the development plans or in other official documents. Some

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According to the Turkish Plan (p. 162): "The most important element in development is manpower. The success of a development plan depends on the participation in the development efforts of manpower of appropriate quality and quantity and at the appropriate time."

The Yugoslav Plan 1971-1975 states that "Resolute steps should be taken in work organisations to settle the problem of the shortage of close to half a million skilled personnel already at the present stage of the development; scientifically based, more skilled and more complex operations are becoming the basic condition of efficient production. Today it is no longer possible to make decisions about production and economic policies without a scientific foundation; it is impossible to work economically with complex installations without appropriate knowledge and skills." An Outline of the Concepts of the Social Plan of Development 1971-1975, Federal Executive Council, Belgrade, January, 1970.

of these directives, such as the development of education to preserve and diffuse further the national cultural values (or to create good citizens), are outside the scope of this report as they are related to the particular traditions and other socio-political conditions of each country, although such objectives can affect educational developments by influencing curricula development or the pattern of educational expansion (e.g. a lower rate of expansion in technical education in favour of more humanistic studies). In the same documents, governments are also pledged to pursue policies for ensuring recurrent education; for modernising curricula and teaching methods; for raising the status and quality of the teaching staff; for increasing student participation in joint work with teachers; and for improving educational institutions. But the real purpose of these directives is to identify strategic areas for specific research and policy planning and to initiate activities which will lead to the realisation of the long-term educational policy objectives, as presented above.

THE PATTERN OF EDUCATIONAL EXPANSION(1)

A comparative analysis of the evolution of the educational systems in the developing Member countries is beyond the scope of this report. Educational expansion is examined here to ascertain the major problems specific to each country which have arisen mainly from the evolution of the demand for educational services or from the application of long-term educational development policies. This, of course, does not exclude the identification of certain common characteristics or of similar strategic problems in the general process of educational growth in these countries over the next decade, if only because they are all now at roughly the same stage of social and economic development.

All five countries have shown a remarkable capacity to achieve high rates of educational expansion over a rather short period of time (1959-1969). The most important developments have taken place in higher and secondary education (Table 6).

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1) Developments in pre-primary education are not examined in this report as they are the subject of a separate study. The same applies to training outside the formal system such as apprenticeship courses, on-the-job training, adult education, etc.

With the exception of Turkey, most of the countries did not experience important quantitative changes in primary education because by 1960 they had already reached satisfactory levels of school attendance at this level; furthermore, in Greece, Portugal and Spain the rates of population increase were low because of high emigration. Greece (six years' primary education) had attained full enrolment by the year 1961.(1) In Portugal (four years), the number of pupils in the 7-10 age group was already 93.3 per cent of the corresponding total population in 1960.(2) In Spain (four years), the enrolment ratio by 1960 was 84.5 per cent,(3) and in Yugoslavia, over a total eight-year period of primary education, it was 83 per cent.(4)

A significant achievement was made by Turkey (five years of primary education) which, to arrive at a satisfactory standard,(5) had to face an overall increase of roughly two and a half million pupils (100 per cent) within an eleven-year period (1959-1970). Turkey began this effort from a rather low enrolment ratio (around 70 per cent in 1960) and at the same time had to cater for large increases in school-age population over the period owing to the very high birth rates.

In secondary general education, overall enrolment increases over the same period (1959-1969) were over 134 per cent in Yugoslavia and up to 142 per cent in Turkey. Secondary technical and vocational education, with the exception of Greece, has shown a slower rate of expansion; as a result the proportion of general education in total secondary education was further increased.

In higher education, the increase in enrolments was equally significant. In Portugal, Spain and Yugoslavia enrolments in all higher education in 1970 were 2.3 times higher than in 1960, in Greece (in 1969) three times higher, and in Turkey (in 1971) 2.4 times the 1961 level. But the branch which has shown the

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1) The Mediterranean Regional Project: Greece, OECD, Paris, 1965, p. 54.

2) Demographic Yearbook of U.N. - 1963.

3) The Mediterranean Regional Project: Spain, OECD, Paris, 1965, p. 34.

4) The Mediterranean Regional Project: Yugoslavia, OECD, Paris, 1965, p. 51.

5) According to the Second Five-Year Development Plan (Table 97, p. 194), the enrolment ratio in primary education in Turkey was 89.7 per cent for the year 1968-1969.

most dramatic increases in enrolments over the period (around 15 per cent per year in Greece, Turkey and Yugoslavia, and 7.4 per cent and 9.0 per cent, respectively, in Spain and Portugal) is non-university type higher education. This branch, which was a negligible part of the educational structure of the five countries in 1959, contributed substantially to the total increase in all higher education over the period under consideration (by 48 per cent in Turkey, 44 per cent in Yugoslavia, 28 per cent in Spain, 24 per cent in Portugal and 13 per cent in Greece).

It is interesting to note that the proportion of university students in science and technology has increased considerably in Greece, Turkey and Yugoslavia. In Spain, there was only a slight increase, and Portugal even showed a decrease. By 1970 this proportion was 41 per cent in Yugoslavia, 39 per cent in Spain, 36 per cent in Turkey, 3[illegible] per cent in Portugal and 25 per cent in Greece (Table 6).

By 1968, enrolment ratios in Spain, Greece and Yugoslavia were approaching full attendance for the age group corresponding to the first eight years of schooling (Table 7). Portugal and Turkey still had to make efforts in that direction.

All five countries are lagging behind the advanced European countries in their proportions of the 14-17 age group being educated (upper secondary education). The main reason seems to be the continuation of regional disparities in income and in the distribution of educational facilities. Children enter the labour force at an early age, especially in the agricultural areas where the labour intensiveness of agricultural activities is more pronounced. But even in the urban areas where more educational facilities are available, living standards of the lower-income groups are still so low that a major portion of this age group is obliged to take up work in either industry or the services sector.

Enrolment rates for the 18-22 age group in Greece, Spain and Yugoslavia were comparable to those prevailing in other advanced European countries. One possible reason for this is the social prestige of higher education combined with the limited opportunities that upper-secondary level studies provide for better jobs and social promotion. In Yugoslavia, the two-year post-secondary schools have played an important role

Table 6

AVERAGE ANNUAL RATE OF GROWTH AND PERCENTAGE DISTRIBUTION OF ENROLMENTS
BY LEVEL OF EDUCATION

Country	Level of Education	Primary	Secondary General	Technical and Vocational	Teacher Colleges	Non-University Type Higher Education	University		Enrolment Total
							Total	of which: Science and Technology(1)	
Greece :									
- Rate of growth	1959/60 - 1968/69	0.4	5.5	6.7	0.4	15.2	12.5	16.2 (3)	2.3
- Percentage distribution	1959/60	73.3	20.6	3.8	0.2	0.2	1.9	(19.6)	100.0
	1968/69	61.9	27.2	5.6	0.2	0.6	4.5	(25.3)(4)	100.0
Portugal :									
- Rate of growth	1959/60 - 1969/70	1.5	9.4	3.6	- 0.2	9.0	10.2	5.5	2.8
- Percentage distribution	1959/60	79.3	9.8	8.4	0.3	0.5	1.7	(39.6)	100.0
	1969/70	68.6	18.5	9.1	0.3	0.8	2.7	(31.2)	100.0
Spain :									
- Rate of growth	1960/61 - 1969/70	1.6	12.5	5.6	- 0.5	7.7	10.7	15.0	3.8
- Percentage distribution	1960/61	80.4	11.6	4.0	1.0	1.1	1.9	(38.0)(2)	100.0
	1969/70	66.0	23.9	4.7	0.7	1.4	3.3	(39.1)	100.0
Turkey :									
- Rate of growth	1959/60 - 1970/71	6.5	12.0	5.5	10.7	15.0	7.7	9.5	7.3
- Percentage distribution	1959/60	84.3	10.8	2.4	0.7	0.4	1.4	(30.1)	100.0
	1970/71	77.4	17.2	2.0	1.0	0.9	1.5	(36.0)	100.0
Yugoslavia :									
- Rate of growth	1959/60 - 1969/70	1.0	8.8	7.3	- 1.6	15.3	6.5	7.4	1.9
- Percentage distribution	1959/60	89.4	2.7	3.4	0.9	0.6	3.0	(37.2)	100.0
	1969/70	84.6	5.3	5.7	0.6	2.2	4.6	(40.7)	100.0

1) The figures in brackets represent the share of science and technology in total enrolments in university-type higher education.

2) Year 1959/60.

3) Period 1959/60 - 1969/70.

4) Year 1969/70.

Table 7

ENROLMENT RATIOS FOR THE DEVELOPING COUNTRIES AND FOR SELECTED EUROPEAN COUNTRIES

Age Group	Greece 1968-69	Portugal 1969-70	Spain 1969-70	Yugoslavia 1970-71	Belgium 1966-67	France 1967-68	Nether-lands 1967
10	100.0	100.0	100.0		100.0	100.0	99.8
11	98.1	94.8	97.7		99.1	100.0	99.8
12	78.8	84.9	91.0		98.7	100.0	99.8
13	65.1	59.3	79.2		99.1	98.5	99.8
14	57.1	27.7	49.7		87.0	84.6	90.5
15	50.6	25.6	31.7		75.1	62.1	71.9
16	47.1	22.8	26.7		61.3	54.5	53.0
17	40.0	20.5	20.5		47.0	39.8	35.3
18	23.8	18.5	16.9		33.2	28.3	24.2
19	..	15.0	14.2		24.4	19.9	17.0
20	..	12.2	16.6		16.9	13.2	12.3
21	..	8.9	9.3		13.3	9.9	9.1
22	..	6.8	5.7		7.2	7.2	6.4
23	..	5.5	5.0		5.1	6.0	5.5
6-13	91.0	83.7 1)	96.0	94.0 1)	99.8	99.8	99.7
14-17	48.7	21.8 2)	32.4	44.0 2)	67.7	59.9	62.7
18-22	15.4	9.8 3)	12.4	18.5 4)	19.5	16.3	13.9

1) Age group 7-14.

2) Age group 15-18.

3) Age group 19-23.

4) Age group 19-23.

Year 1968: 1970 Educational Growth Enquiry.

Sources: For Greece, Portugal, Spain and Yugoslavia: Statistical Appendix I; for all other countries: replies to the 1970 Educational Growth Enquiry.

Comparable data are not available for Turkey. The Turkish reply to the Educational Growth Enquiry gives the 1968-69 enrolment ratios, by age group, as follows:

Age Group	Enrolment Ratios %
7 - 12	91.2
13 - 15	31.9
16 - 18	17.5
19 - 22	7.3

in attracting students to higher studies.(1) In Greece, an additional reason is that the educational requirements for many jobs (especially in the public services and the banks) are too high.(2)

Information is not available for all the countries(3) on the extent to which educational demand by educational level was satisfied during the period under consideration. In most cases entrance examinations limit the number of new entrants at upper levels (especially upper secondary and university institutions) when the number of applicants exceeds that of places available. In some cases the shortage of capacity to meet educational demand at university level has resulted in a large number of young people leaving their country to study in foreign universities.(4) This is especially the case in Greece (the proportion of students studying abroad in the total number of university students in 1971 was 22 per cent) and, to a lesser degree, in Turkey (some five thousand students abroad as against a total of 95.5 thousand in the Turkish universities). However, for future planning work, the reverse movement should also be emphasized. In addition to domestic demand for educational services, the number of foreign students in the national universities has shown a rapid increase over the decade in all five countries;(5) in 1969 its proportion of the total number of university students was, in Greece 8.2 per cent, in Portugal 2.3 per cent, in Spain 3.6 per cent, in Turkey 6.2 per cent and in Yugoslavia 2.2 per cent.

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1) Mediterranean Regional Project: Yugoslavia, OECD, Paris, 1965, p. 45: "The fact that the course is very specific and of relatively short duration, and that graduates can obtain good situations as lecturers, plant engineers, social workers, etc., probably counts for as much in the attractions of these schools as the fact that admission is relatively easy and that graduates can continue their studies at the second level of the university."

2) See Salomon Wald: Individual Demand for Higher Education in Greece, OECD, Athens, 1964.

3) Data for Greece (see Table IIIa in Appendix I) indicate that there is a large unsatisfied demand for higher education. By 1969-70, of the university candidates for science and technology only 33.6 per cent were accepted; in non-university type higher education the corresponding proportion was 39 per cent.

4) See Higher Education in Europe, Problems and Prospects. Statistical Study, UNESCO, 1973.

5) See Appendix I.

The rapid educational expansion has helped substantially in meeting development requirements. The low educational standards of large masses of the rural population has been one of the main weaknesses of the social and economic structure of the developing countries. Rapid improvement in the agricultural sector is hindered by the mass of illiterate(1) or inadequately trained people who are attached to traditional methods of organisation and production. When they move to the cities, they have a limited capacity to adapt themselves rapidly to new job requirements. The progress made in primary education throughout the countries is now contributing to the solution of development problems, especially those emerging from the changing relationships between the rural and the other sectors of the economy.

Technical education at secondary level expanded at a faster rate than industrial manpower, and thus ensured a better qualitative structure of the labour force at middle level. The improvement was even greater at the higher education level. Table 8 shows that the ratio of holders of higher education diplomas to total manpower was substantially improved in all five developing countries. An analysis of these data reveals that the proportion of science and technology diplomas in the total labour force increased, in most cases, faster than the proportion of total diplomas.

A comparison with the advanced countries shows the differences which exist in social and economic structures, in technological levels and in the organisation of production and gives some indication, therefore, of the effort required of the developing countries if they are to hasten the changes desired in manpower structure and to raise the level of qualifications of

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1) The illiteracy ratio in Greece is 14 per cent (1971 population census). According to the U.N. *Compendium of Social Statistics 1963*, the illiteracy ratio in Spain (1960) was 12.8 per cent, and in Yugoslavia (1961) 21.4 per cent (population of 10 years of age and over). In Turkey, the illiteracy rate of the population 15 years of age and over was, in 1960, 61.9 per cent (*UNESCO Statistical Yearbook 1970*). In Portugal, 20 per cent of the active population were illiterate in 1960 (the *MRP-Portugal*, p. 45). The largest number of illiterates was found in agriculture.

Table 8

HOLDERS OF HIGHER EDUCATION DIPLOMAS IN THE DEVELOPING COUNTRIES AND IN SELECTED ADVANCED EUROPEAN MEMBER COUNTRIES

Thousands

Countries		Total Labour Force (a)	Holders of Higher Education Diplomas (excluding primary school teachers) (b)	Holders of Science and Technology Diplomas (Higher Education) (c)	(b) as % of (a)	(c) as % of (a)
Greece	1961	3,663	79.4	10.6	2.2	0.3
	1971	3,388(1)	180.0(1)	26.0(1)	5.3	0.8
Portugal	1960	3,316	42.1	8.8	1.3	0.3
	1970	3,030(2)	60.0	14.0	2.0	0.5
Spain	1960	11,634	194.0(3)	59.6(3)	1.7	0.5
	1970	12,372(2)	333.0	129.0	2.[illegible]	1.0
Turkey	1960	11,999	105.0(5)	18.3(5)	0.9	0.15
	1967	13,194(4)	158.0	32.0	1.2	0.24
Yugoslavia	1961	8,373	181.6	33.7	[illegible].2	0.4
	1970	9,389(6)	420.0	97.0	4.5	1.0
Belgium	1961	3,375	117.4	42.7	3.5	1.3
Netherlands	1960	4,168	130.0	60.3	3.1	1.4
Norway	1960	1,406	37.9	13.1	2.7	0.9

1) 1971 Population Census.
2) OECD Observer, February, 1972.
3) MRP - Spain, Table 49.
4) OECD Observer, February, 1969.
5) MRP - Turkey, Tables 12 and 13.
6) Economic Survey for Yugoslavia, OECD, 1973, p. 64.

- If not otherwise stated, Statistics of the Occupational and Educational Structure of the Labour Force in 53 countries, OECD, 1969.

- The figures for holders of higher education diplomas for recent years, with the exception of Greece, were obtained by adding to those of 1960 or 1961 the total number of higher education graduates over the period under consideration. Deductions were also made for replacement (for deaths, retirements, emigration) on the basis of information available in the MRP reports.

the labour force.(1) Unfortunately, such comparisons can be made with only a few advanced OECD countries for the years around 1960 and for selected occupational groups. As can be seen from Table 8, in 1969 none of the five countries had yet reached (and only Spain and Yugoslavia were approaching) the percentage of scientists and technologists represented in the total labour force in Belgium and the Netherlands *nine years before*. But, as was pointed out above, the enrolment trends in science and technology promise further improvement in the near future.

Because of lack of information about educational developments by region, only a few specific examples can be given to illustrate the results of the policies to reduce regional disparities in educational participation during the period under consideration. In Turkey, in upper secondary education, the highest participation rate in the year 1960-1961 was manifested in the region "Turkey in Europe" (15.4; the highest in all other regions was 5.7). By 1965-1966, the participation rate in this region was reduced to 11.1; the proportion in the other regions increased correspondingly.(2)

In Yugoslavia, the disparities which existed in 1960 in secondary general and technical education among the regions (Bosnia, Herzegovina, Macedonia and the autonomous region of Kosovo had the lowest enrolment ratios) seem to have been eliminated by 1960-1970; for all these regions participation at the secondary level was approximately equivalent to their respective proportion of the country's total population.(3)

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1) A direct assessment of future development requirements in qualified manpower can be found in the MRP reports. With regard to higher personnel, the following increases in the number of holders of higher education diplomas were envisaged in these reports:

Greece (1961-1974): 45.5%
Portugal (1960-1975): 137.2% Turkey (1960-1977): 123.0%
Spain (1960-1975): 79.7% Yugoslavia (1960-1975): 185.2%

On the basis of the data in Table 8, the following increases have taken place over a shorter period of time·

Greece (1961-1971): 126.7%
Portugal (1960-1970): 42.5% Turkey (1960-1967): 50.5%
Spain (1960-1970): 71.6% Yugoslavia (1961-1970): 131.5%

2) *Group Disparities in Educational Participation and Achievement*, OECD, Paris, 1971.

3) Yugoslav *Statistics of Higher Education* 1969-1970 and *Mediterranean Regional Project - Yugoslavia*, OECD, 1960, p. 50.

On the other hand, statistics available for the other three countries would suggest a persistence of regional disparities. In Greece, in higher education, the proportion of students, whose parents have their residence in the Athens area to the total number of students increased from 30.9 per cent in 1961-1962 to 38.7 per cent in 1969-1970.(1) The population of the Athens area represented 24.5 per cent of the total population in 1961 and 31.8 per cent in 1971.

In Portugal, the region of Lisbon increased its ratio of "liceal" enrolment to the population 11-18 years old: in 1954-1955 it was the highest in Portugal (11.7) and it rose to 25.3 in 1964-1965.(2)

In Spain, the Madrid region, with a proportion of 8.4 per cent of the total population (1960), represented 14.7 per cent of total enrolments in secondary education (the highest in Spain in 1958-1959). This rate rose to 16 per cent in the year 1969-1970.(3)

The attainment of full attendance in primary education and the rapid expansion of secondary education, especially of the first cycle, has no doubt contributed in some way to reducing social disparities in educational participation in the developing Member countries. Unfortunately, there is no statistical evidence of the changes which have occurred during the period under consideration in the distribution of students by socio-economic category in upper secondary and higher education.(4) Data are available only for the years close to 1960-1961.(5) but any analysis of this information is likely to be misleading because of the enormous differences in classification and definition.

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1) Greek Statistics of Higher Education 1961-1962 and 1969-1970.

2) Group Disparities in Educational Participation and Achievement, OECD, Paris, 1971.

3) Spanish Statistics of Secondary Education 1958-1959 and 1969-1970.

4) In Greece the number of university students who are children of manufacturing and mining workers increased by 311 per cent, compared with a total increase in the number of university students of 185 per cent over the period 1959-1969. Thus, their proportion to total students rose from 10.2 per cent in 1959 to 14.8 per cent in 1969. (See Table IX in The Statistical Appendix for Greece.) According to the Greek 1971 population census, the proportion of mining and manufacturing workers in the total labour force was 24 per cent in 1971 (as against 17 per cent in 1961).

5) Group Disparities in Educational Participation and Achievement, OECD, Paris, 1971

Another characteristic of educational development in the same period is the relative increase in female participation at all educational levels (Table 9). With the exception of Turkey, the number of girls in primary and secondary education in these countries represented, by 1969, between 45 and 55 per cent of total enrolments. Female participation in universities increased in the four countries (in Turkey it remained at 23 per cent), but it continues to be relatively low in Greece and Spain (31 per cent and 25 per cent, respectively). The highest participation at this level is in Portugal (45 per cent) and Yugoslavia (38 per cent)

There has been a higher overall increase in enrolments in the public sector than in the private. It should be noted here that the private sector of the educational system is important only in Spain and Portugal(1) (see Table 10). In Greece, the private sector plays an important role in secondary technical and vocational education. In Spain one of the most important developments over the period 1959-1967 is the rapid expansion of the public sector in secondary general education (share of total enrolments increased from 16.9 per cent in 1959 to 32.2 per cent in 1969). On the other hand, private institutions have increased their share in non-university type higher education in Turkey and in higher education in Portugal.

THE EVOLUTION IN RESOURCES

In view of the weaknesses of the educational systems of the developing Member countries, as documented for the beginning of the period under consideration,(2) it may be asked how

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1) In Spain and Portugal church educational institutions represent the major part of the private sector.

2) Some of the findings of the Mediterranean Regional Project reports for the period close to 1960 were the following:
   - educational expenditure, as a percentage of the GNP, was the lowest in Western Europe;
   - the shortage of teachers was a major problem for educational expansion. Teaching staff salaries, at all levels of education, were found to be low, which limited the possibilities for a rapid increase in teacher supply;
   - there was a lack of adequate facilities (classrooms, teaching equipment, laboratories, etc.);
   - repetition and dropout rates were rather high in all five countries.

Table 9

FEMALE PARTICIPATION AS PERCENTAGE OF TOTAL ENROLMENTS

Country / Level of Education	Greece		Portugal		Spain		Turkey		Yugoslavia	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Primary	47.6	47.8	47.6	48.6	..	50.0	37.0	42.3	46.6	46.5
Secondary General	40.8	45.7	46.7	47.8	38.8	45.2	25.0	26.1	48.7	55.8
Technical and Vocational	18.0	15.7(1)	29.2	36.6	..	22.6	38.8	40.0	44.1	54.0
Teacher Colleges	46.6	45.3	66.1	94.2	62.2	55.0	25.0	46.8	66.5	64.1
Higher Non-University	76.2	31.0(1)	24.4	38.8	26.3	17.9	9.9	14.9	36.5	43.4
University	22.0	31.3	29.9	45.0	16.6	25.2	23.3	23.3	28.8	37.9

1) Year 1968-69.

Table 10

ENROLMENTS IN PRIVATE EDUCATION AS PERCENTAGE OF TOTAL ENROLMENTS

Country / Level of Education	Greece		Portugal		Spain		Turkey		Yugoslavia	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Primary	7.1	7.1	4.6	5.2	..	27.7	1.0	0.5	-	-
Secondary General	16.2	13.2	61.0	45.7	83.1	67.8	7.1	3.8	-	-
Technical and **Vocational**	71.4 (1)	68.4 (2)	8.0	7.5	..	..	2.4	1.0	-	-
Teacher Colleges	-	-	15.1	19.3	12.3	9.1	-	-	-	-
Higher Non-University	..	..	9.0	5.1	..	..	1.6	25.6	-	-
University	-	-	10.6	13.0	0.4	3.2	1.7	1.7	-	-

1) Including non-university type higher education.

2) Year 1968-69. Including non-university type higher education.

educational resources were developed to deal effectively with the rapid increase in the demand for educational services during the decade.

One indication of the magnitude of educational effort in these countries is the changes in the proportion of gross national product devoted to total educational expenditure - public and private. Table 11 shows a growth of that proportion between the years 1960 and 1968 for all countries.

These rates, however, continue to be of the lowest among the European Member countries.(1) With general income levels having been low in the developing countries and a relatively high percentage of expenditure necessarily going for basic needs, margins were limited for rapid increases in educational expenditure. It is interesting to note, as a result of the analysis of the data of Table 11, that Greece has devoted 3.8 per cent of the total increment of GNP over the period 1960-1968 to increasing educational expenditure, Portugal 2.6 per cent, Spain 2.9 per cent, Turkey 5.2 per cent and Yugoslavia 4.0 per cent.

The number of teachers has increased at a high rate over the period at nearly all educational levels. A comparison of growth rates for enrolments and teachers over specified periods can be found in Table 12. Greece had to face a strong pressure of numbers over the 1960's and, in spite of the fact that the rate of increase in teaching staff exceeded that of the number of pupils at almost all educational levels, the pupil/teacher ratios (with the exception of teachers colleges) remained unfavourable.(2) In Portugal, satisfactory standards were maintained at the upper educational levels; however, primary education continues to be characterised by a high pupil/teacher ratio. Unfavourable ratios still prevail in both Spain and

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1) Country replies to the OECD Educational Growth Enquiry for the years 1968 or 1969. (Public educational expenditure only, as a percentage of GNP, was 4.7 per cent in France, 5.0 per cent in Switzerland, 5.8 per cent in Norway, 6.0 per cent in Denmark, 6.3 per cent in Finland, 6.7 per cent in the Netherlands and 7.6 per cent in Italy).

2) In most of the other European Member countries, pupil/teacher ratios in primary education are below 28.0; in secondary general education below 20.0; and in university education below 12.0. See: The Teacher and Educational Change: A New Role, Vol. II. OECD, 1974, and Quantitative Trends in Teaching Staff in Higher Education, OECD, Paris, 1971.

Table 11

PUBLIC AND PRIVATE EDUCATIONAL EXPENDITURE (1960, 1968)

At current prices

Billions of local currency

Country	1960			1968		
	GNP at Market Prices (a)	Educational Expenditure (b)	(b) as % of (a)	GNP at Market Prices (a)	Educational Expenditure (b)	(b) as % of (a)
Greece	105.6	2.08	1.97	227.8	6.69	2.94
Portugal	72.0	1.62	2.25	160.6(1)	3.88(1)	2.42
Spain	620.4	13.38	2.16	2 010.5(1)	53.36(1)	2.65
Turkey	49.0	1.16	2.37	105.0	4.07	3.88
Yugoslavia	32.4	0.96	2.96	181.9(2)	6.94(2)	3.82

1) Year 1969.

2) Year 1970, Economic Survey for Yugoslavia, OECD, 1973, p. 59.

Sources: - For the Gross National Product:

National Accounts 1960-1970, OECD. For Yugoslavia, the Gross Domestic Product, at market prices; the GNP figure was not available for recent years, but the difference between GNP and GDP was insignificant over the period 1960-1968 (0.4% in 1968).

- For Educational Expenditure:

For the year 1960: Country replies to the OECD questionnaire, "Comparative Analysis of Educational Expenditure". For Portugal data were available for only public expenditure (1,330 million escudos); on the basis of public expenditure per pupil by educational level, private expenditure for 1960 was estimated at 290 million escudos and was added to public expenditure to obtain total expenditure.
For the years 1968-1970: For Greece, Turkey and Yugoslavia, replies to the OECD 1970 educational growth enquiry; for Spain and Portugal the replies to the OECD questionnaire, "Comparative Analysis of Educational Expenditure"; for Portugal the data for private expenditure (1969) are found in the Appendix I of this report (Portugal, Table VIII).

Table 12

PERCENTAGE INCREASE IN ENROLMENTS AND TEACHERS BY LEVEL OF EDUCATION

Country / Educational Level	Primary	Secondary General	Technical and Vocational	Teachers colleges	Non-University Type	University
Greece (1962/63 to 1969/70)			(1)			
Increase in enrolments	2.08	40.72	72.50	- 5.62	...	127.47
Increase in number of teachers	14.64	49.50	95.98	30.33	...	235.42
Pupil/teacher ratio (1962/63)	37.21	30.41	34.09	14.88	...	39.96
Pupil/teacher ratio (1969/70)	33.15	28.60	30.03	12.50	...	26.81
Portugal (1959/60 to 1969/70)						
Increase in enrolments	13.93	146.79	42.03	- 2.53	120.85	
Increase in number of teachers	15.81	184.12	63.51	21.75	70.29	
Pupil/teacher ratio (1959/60)	33.81	17.97	18.62	15.82	14.49	
Pupil/teacher ratio (1969/70)	33.26	15.61	16.17	12.67	18.79	
Spain	(2)	(2)	(2)	(2)	(3)	(4)
Increase in enrolments	28.16	159.10	52.50	10.21	84.58	133.37
Increase in number of teachers	47.50	174.31	57.41	-16.06	79.92	110.32
Pupil/teacher ratio (beginning of period)	37.77	26.14	18.06	17.04	16.00	11.94
Pupil/teacher ratio (end of period)	32.83	24.70	17.40	21.80	16.42	13.25
Turkey (1959/60 to 1970/71)						
Increase in enrolments	99.31	246.58	80.72	207.21	365.88	127.00
Increase in number of teachers	145.29	124.49	75.26	199.31	145.15	160.96
Pupil/teacher ratio (1959/60)	46.52	21.23	11.56	24.24	13.60	13.29
Pupil/teacher ratio (1970/71)	37.80	32.77	11.92	24.88	25.85	11.56
Yugoslavia (1959/60 to 1969/70)						
Increase in enrolments	10.33	133.73	102.78	-17.70	315.38	88.06
Increase in number of teachers	47.02	105.78	...	-26.23	149.11	73.[illegible]9
Pupil/teacher ratio (1959/60)	32.56	16.16	...	14.62	11.82	...
Pupil/teacher ratio (1969/70)	24.43	18.35	...	16.31	19.71	13.5[illegible]

1) Technical and non-university type higher education. 2) 1961/62 - 1970/71. 3) 1961/62 - 1967/68. 4) 1961/62 - 1969/70.

Table 13

GRADUATES AS PERCENTAGE OF LAST-YEAR ENROLMENTS

I. PRIMARY EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	97.9	1969-70	99.4
Portugal	1960-61	72.6	1969-70	82.3
Spain		..		..
Turkey	1961-62	90.1	1969-70	95.4
Yugoslavia	1961-62	92.0	1969-70	94.6

II. SECONDARY GENERAL EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	78.3	1969-70	87.9
Portugal	1960-61	39.9	1969-70	42.8
Spain	1960-61	70.3	1967-68	77.5
Turkey	1960-61	83.9	1966-67	85.2
Yugoslavia	1961-62	89.9	1969-70	97.0

III. UNIVERSITY EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	86.5	1969-70	58.7
Portugal		..		..
Spain	1960-61	38.5	1969-70	42.9
Turkey		..		..
Yugoslavia	1961-62	81.1	1969-70	95.8

Table 14

REPEATERS IN THE FIRST YEAR AS PERCENTAGE OF FIRST YEAR ENROLMENTS

I. PRIMARY EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	15.8	1969-70	11.9
Portugal	1960-61	31.4	1969-70	35.1
Spain		..		..
Turkey	1961-62	31.9	1966-67	3.6
Yugoslavia	1961-62	6.2	1969-70	10.5

II. SECONDARY GENERAL EDUCATION

	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	13.0	1969-70	9.8
Portugal	1960-61	11.2	1969-70	13.7
Spain				
Turkey	1960-61	15.4	1966-67	14.9
Yugoslavia	1961-62	6.2	1969-70	8.4

III. UNIVERSITY EDUCATION

	Period beginning		Period ending	
	Year	%	Year	%
Greece	1959-60	17.1	1969-70	36.0
Portugal		..		..
Spain		..		..
Turkey		..		..
Yugoslavia	1961-62	14.3	1969-70	21.9

Table 15

NUMBER OF STUDENTS ABANDONING THEIR STUDIES AS PERCENTAGE OF TOTAL ENROLMENTS(1)

I. PRIMARY EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1960-61(2)	0.9	1968-69(2)	1.2
Portugal	1960	5.2	1969	4.2
Spain		..		..
Turkey	1961	3.9	1966	1.9
Yugoslavia	1960-61(2)	9.4	1969	5.2

II. SECONDARY GENERAL EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1960-61(2)	9.0	1968-69(2)	10.6
Portugal	1961	9.0	1969	18.6
Spain		..		..
Turkey		..	1965	..
Yugoslavia	1960-61(2)	11.7	1969	10.3

III. UNIVERSITY EDUCATION

Country	Period beginning		Period ending	
	Year	%	Year	%
Greece	1960-61(2)	5.5	1968-69(2)	5.2
Portugal (all higher education)	1961	6.4	1969	10.7
Spain		..		..
Turkey		..	1965	10.4
Yugoslavia	1960-61(2)	21.7	1968-69(2)	19.6

1) Including drop-outs, deaths and those returning to school after having left for one or more years.

2) Two-year average.

Turkey in primary and secondary general education as well as in the teachers colleges. Yugoslavia seems to have attained a balanced quantitative expansion of enrolments and teachers.

The number of graduates as a percentage of enrolments in the final class of both primary and secondary education has shown an increase in the four countries for which data are available, between 1960 and 1969. Over the same period, the proportion of repeaters in the first class, at both these educational levels, decreased or was kept at rather low levels. Only in primary education in Portugal does it continue to be high. (Tables 13 and 14).

In primary education, the proportion of pupils who abandon their studies was reduced to a reasonable level; in secondary education, however, it continues to be quite high in the three countries for which data are available (Table 15).

In university education, the proportion of graduates to enrolments in the last year of studies has shown a sharp decrease in Greece, while in Spain and Yugoslavia the proportion increased. Greece and Yugoslavia have recorded a high rate of repeaters in the first class. Finally, the proportion of those who abandon university studies is rather high in Yugoslavia, Turkey and Spain; in Greece, on the other hand, the proportion is low.

Current information with regard to pupils per classroom, laboratory facilities, condition of buildings, etc. is lacking. There seems to have been an overcrowding of university institutions as a result of high demand pressure at this level. Enrolments in the University of Athens increased, for example, from some nine thousand students in 1960 to almost 24 thousand in 1969; in Lisbon University from some 7 thousand in 1960 to more than 16.5 thousand in 1971; in the University of Madrid from some 23 thousand in 1960 to almost 48 thousand in 1970; and in the University of Ankara and Istanbul from some 18 and 26 thousand, respectively, in 1960 to more than 25.6 and 37 thousand in 1971.

An attempt to discuss the above aspects of the operation of the educational systems in the developing Member countries is made difficult because conditions and policies differ widely from country to country. In some cases, it appears that with the pressure of demand the situation has worsened by comparison with the years around 1960 while, in others, resources seem to have been so used that the 1960 educational standards were maintained and even improved. Of course, administrative measures such as entrance examinations have been used in most cases to repress demand for educational services to levels corresponding insofar as possible to available capacity. The information presented in this section, which covers only certain aspects of the problem.(1) would suggest that there is still a large scope for improvement in specific areas in each country. Existing shortcomings together with unsatisfied demand should certainly be assessed in detail when planning the future expansion of an education system's capacity.

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1) It should be emphasized that all ratios given in this section are national averages. The MRP reports found important regional disparities in the developing Member countries, such as secondary schools with classes of 50 or 60 pupils or primary schools with one class and one teacher.

Chapter II

PERSPECTIVES FOR EDUCATIONAL DEVELOPMENT DURING THE 1970s

MAJOR STRUCTURAL CHANGES IN EDUCATION

In all five countries, the reforms enacted during the last decade and those considered for implementation in the immediate future are leading to a radical restructuring of the educational systems within the next ten-year period. In fact, the new structure of these systems as shaped by the reforms has conformed, to a large extent, to the pattern of educational expansion since the early 1960s, but it also reflects important policy decisions in the framework of the overall social and economic objectives.

Thus, eight-year compulsory education is at the stage of realisation in some of the five countries and in the others , is one of the main educational policies to be pursued in the 1970s(1).

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1) In Greece, compulsory education was extended from six to nine years in 1964, but in 1968 the nine-year requirement was provisionally lifted. The Greek Development Plan (1973-1977) provides at present for the extension of compulsory education to cover a period of eight years.

The Portuguese Educational Reform-1972 provides for the extension of compulsory education from six to eight years.

In Spain, eight-year compulsory education was enacted in 1965.

In Turkey, the "Primary Education Law No. 222" requires an eight-year period of compulsory education, although only five years are provided at present. The Turkish Third Five-Year Plan provides for the extension of the duration of compulsory education to cover eight years (see New Strategy-1973-1995 Ankara, 1973 p. 61).

In Yugoslavia, the eight-year compulsory education period was enacted as long ago as 1958.

Accelerated progress in that direction is a target of strategic importance for the overall social and economic development of these countries. Eight years of basic studies could be considered as the necessary minimum period of educational preparation, at the end of which the individual should be in a position to choose among future alternatives, having developed an ability to pursue further study and/or to adjust to new working conditions or job requirements.

In Spain, Turkey and Yugoslavia(1), the eight-year compulsory education is associated with the establishment of an eight-year comprehensive school. In Portugal, the first four years of compulsory education will take place in the primary school and the next four years in the preparatory school (which covers two periods of two years each: the "observational course" and the "orientation course"). In Greece, an educational committee has been set up to study the problem.

In all above cases, children are, or will be, grouped in one and the same school, which may be considered as a major step towards offering equality of educational opportunity at this level. Lower technical schools will gradually be abolished or absorbed by the new system.

The reforms provide that during the first eight years of studies the children are offered basic, non-specialised education: the need to prepare for working life for those not wishing to continue further studies is also provided for through courses designed to impart techno-scientific knowledge, offer practical experience and develop physical skills.

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1) In Spain, "The most important objective of the reform is that of social integration, by the full participation of the children of the less privileged groups all over the eight-year period of compulsory education, and by transforming the primary and the first cycle of secondary schools into one single General Basic Education School". This education will be free for all. (Spanish reply to the 1970 Educational Growth Enquiry.)

In Turkey, "basic education, which includes the ages of 7-14, will be reorganised to constitute the lower level of the educational system by comprising both present primary schools and the middle schools". (See National Education Reform Strategy, Ankara, 1973. p. 32).

In Yugoslavia, the foundations of the eight-year comprehensive school were laid down by the reform of primary education in 1958. Four- to six-year primary schools are being maintained (in 1969 they represented about 20 per cent of the total number of pupils in primary education) until the eight-year school can be implemented all over the country.

The reforms in upper secondary education now being implemented, or planned for implementation during the next decade, aim at reorganising this educational level either by establishing one single school to prepare for both post-secondary education and for direct entry into professions(1) or by keeping the classical high school and, at the same time, raising the standards of the technical and vocational schools to permit their graduates, in addition to immediate entry to given professional activities, access to any kind of higher education.(2) These reforms will gradually bring to an end the dispersion of educational activities into a multitude of institutions of different standards and qualifications which characterises this sector at present.

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1) In Spain, the Educational Reform of 1970 calls for the present upper cycle of secondary general education and the terminal class to be transformed into a "uniform, multi-purpose bachillerato" of three years' duration which will gradually absorb all other types of education at this level. This new upper secondary school is uniform in that it leads to a single degree, and multi-purpose in that it offers, apart from common and optional subjects, technico-vocational instruction to prepare for occupational activities.

2) In Portugal, the ultimate objective of the Reform is that the upper secondary schools "take on a comprehensive character, so that any normal form of secondary teaching can be provided in the same institutions". At the present time, however, a first phase will be to consolidate all different types of upper secondary schools into three types of institution at this level: the "classical high school", the "technical high school", and the "artistic high school".

In Turkey, "secondary education institutions will be re-organised as an integrated system composed of different schools preparing students for life, for work, and higher education..." (See National Education Reform Strategy, Ankara, 1973, p.35).

In Yugoslavia, according to the 1958 Educational Reform, the objective is "to remove the vestiges of dualism in curriculum structure and the social prestige of different streams of secondary education, and to ensure fuller realisation of the right to secondary and higher education" (Yugoslav reply to the 1970 OECD Educational Growth Enquiry).

In Greece, the dual system is being kept, but an effort is being made to re-organise and raise the standards of upper secondary technical and vocational education, concurrently with the restructuring and development of the classical school.

In *higher education*, an important aspect of the reforms is the expansion, or the establishment, of *post-secondary non-university level institutions* ("polytechnics" or "short-cycle" higher education).(1) Such institutions could satisfy at the same time both individual demand for a large variety of specialisations and the economy's demand for a large number of technicians and other qualified personnel needing post-secondary education but not necessarily at university level.

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1) In Greece, the "Higher Technical Education Centres" were established as a new educational institution at post-secondary, non-university level, separate from universities. They are comprehensive in the sense that they embrace a large range of disciplines; under certain conditions, their graduates have access to university education, but the HTEC's instruction is of a very specialised and practical nature (for assistant engineers, graphic arts, paramedical professions, laboratory workers, programming, marketing, publishing, etc.).

In Portugal, coincident with the development of the universities, the reform provides for the establishment of *polytechnics* and other colleges for specialised professions (auxiliary engineering, industrial arts, publicity and public relations, etc.); graduates from these institutions, after completion of the three-year course, are awarded the Bachelor's degree and can continue studies in the university for higher degrees (*Guidelines of the Reform of Higher Education*, Ministry of National Education, Portugal, 1971, p. 7).

In Spain, the reform provides for the establishment of "University Colleges" as post-secondary educational institutions of short duration; graduates will be entitled to continue their studies at a certain level of university education (Spanish reply to the 1970 Educational Growth Enquiry).

In Turkey, "The academies and other institutions of higher learning will turn out professionals in large quantities in applied sciences: whereas, the universities will train, in required numbers, scientists, researchers, top-level supervisory personnel for fields of production and services, and teaching staff for higher education...there will be educational institutions at different levels and with different functions in this integrated system (of all higher education), but there will be vertical and horizontal mobility between these levels for students in compliance with their abilities". See *National Education Reform Strategy*, *op. cit*., pp. 45 and 48.

In Yugoslavia, the two-year post-secondary schools were reorganised in the framework of the 1960 Reform "as a new type of higher educational institution making it possible to train specialised cadres on a higher vocational level in occupations for which there were previously no higher education facilities". (Yugoslav reply to the 1970 Educational Growth Enquiry). The graduates of these schools may continue their studies in the universities. See also footnote (1), p. 31 of this report.

Most of the governments announce their intention to inaugurate policies for the development of recurrent education(1); but it is still early to see concrete programmes for the implementation of such policies with specific targets, predetermined time periods, and provision of the necessary means.

The above reforms are linked to substantial changes in the internal structures at each educational level (such as enriching the range of study options and restructuring the various faculties or departments in the universities as interdisciplinary units) in an effort to renovate the whole of their educational systems.

A tremendous amount of detailed work, however, will be required for the development of new curricula and for organising the teaching/learning process according to the new evaluation criteria set by the reform plans. Apart from a well-conceived research and development effort, it may be necessary to set up a large pilot sector of new schools and to proceed gradually with the generalisation of this new sector to the whole school system.

Clearly, the crucial problem will be the training of a teaching force capable of responding to the new objectives implied by the new educational structure. The implementation of new policies for teacher training and retraining may, in fact, well be the test which will determine the success or failure of the educational reform effort in these countries.

Finally, the important changes foreseen in the structure of the educational systems are associated with the corresponding extensive reforms of the educational administration at both national and regional levels. The initiation, follow-up and evaluation of the necessary research and development work, and the elaboration of detailed operational plans and their implementation over a long period of time, will require

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1) The Portuguese Reform Project provides that "Candidates of 25 years of age or more, who do not possess the academic qualifications normally necessary for direct admittance to the universities, shall be able to attend the latter if they pass special tests, the system of which shall be laid down by the universities". Guidelines of the Reform of Higher Education, op.cit. The Spanish Reform (1970) includes a similar provision. The objective in Yugoslavia is "to integrate education more closely with working life and co-ordinate training with the needs for manpower; this calls for...devising...a uniform system for the continuing education outside working hours of young people and adults who are already at work." Yugoslav reply to the 1970 Educational Growth Enquiry.

the establishment or the re-organisation of competent services with personnel able to participate in and interpret the reform effort in order to meet the desired objectives. In fact, such provisions are included in all the reform projects; in most cases these projects often go further and make proposals for the modernisation of the whole administrative structure, even at institutional levels.

ENROLMENT FORECASTS FOR 1980(1)

The effort to restructure the entire educational system in all five countries will probably have to take place under conditions of continuing pressure of demand for educational services, especially at the upper educational levels.

This perspective is based on a number of important considerations. First, there still remains a large proportion of the population between 12 and 18 which does not attend school.

Secondly, the economies of all five countries are expected to realise a high growth rate over the next decade, ranging between 5.5 per cent and 7.0 per cent per year. This implies

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1) See Table 16. The technical elaboration of the enrolment forecasts for 1980 was made along the following lines:

Enrolments in the first eight years of studies, which correspond to the eight-year period of compulsory education, for the year 1980 were estimated on the basis of population projections. Total enrolments in 1980 should therefore be roughly equal to the total number of children in the corresponding age group in the same year.

Demographic projections were also used to estimate the number of pupils in upper secondary education. The estimates were calculated on the basis of enrolment ratios to be attained by 1980 taken from official documents as given educational targets in the countries concerned or chosen as "reasonable expectations" in the light of changing conditions of educational development and recent experience, both within the country concerned and in other countries.

For higher education, estimates were based on expected year-to-year changes in the total number of students, derived mainly by the use of transition co-efficients (such as new entrants in universities as a percentage of secondary education graduates; drop-outs and graduates as a percentage of total enrolments, etc.).

The relevant assumptions and estimates, by country, can be found in Appendix II.

Table 16

ENROLMENT FORECASTS FOR 1980

Level of Education and Country	Enrolments (thousands)			Average annual rate of increase	
	1960-61	1969-70	1979-80	1960-69	1969-79
I. First eight years of studies					
Greece	1,050.3	1,145.0	1,175.0	1.0	0.3
Portugal*	..	1,162.2	1,500.0	..	2.6
Spain	..	4,956.2	5,390.0	..	0.9
Turkey	3,198.9	5,666.4	9,100.0	6.6	4.8
Yugoslavia	2,764.4	2,853.1	3,225.0(1)	0.2	1.3(2)
II. Upper secondary education (General and Vocational)					
Greece	185.4	333.4	520.0	7.4	4.5
Portugal*	129.5	225.0	355.0	6.3	4.6
Spain	222.1	471.2	1 100.0	8.8	8.8
Turkey	118.2	317.6	785.0	11.6	9.5
Yugoslavia	334.6	657.7	1.035.0(1)	7.8	4.2(2)
III. Non-university level higher education					
Greece	2.8	11.7	40.0	17.6	13.1
Portugal	5.0	11.6	27.0	9.8	8.8
Spain	44.8	82.6	160.0	7.0	7.0
Turkey	18.6	61.5	(3)120.0	12.7(4)	7.7(5)
Yugoslavia	31.7	77.9	120.0(1)	10.6	4.0(2)
IV. University					
Greece	25.5	72.4	103.6	12.3	3.6
Portugal	19.8	39.3	90.0	7.1	8.9
Spain	77.1	192.1	530.0	10.7	10.7
Turkey	42.0	95.4	(3)155.0	8,6(4)	5.6(5)
Yugoslavia	108.9	161.8	300.0(1)	4.5	5.8(2)

* See footnotes 3, p. 54 and 2, page 55.
1) 1980-81.
2) 1969-1980.
3) 1970-71.
4) 1960-1970.
5) 1970-1979.

further important changes in their economic structure(1) and a rapid improvement in the standard of living of the population. GNP per capita, at 1968 prices, is expected in some countries to increase between 67 and 100 per cent over the period 1968-1980 and in other countries to more than double.(2) Such favourable developments are likely to generate a strong private demand for educational services at higher levels as family incomes and salary levels for qualified manpower rise.

Thirdly, the extension of compulsory education to eight years will necessarily create a higher demand for education at upper levels.

Finally, a "climate" fostering rapid educational expansion has already been created in those countries where there is current public discussion on radical educational reforms and where educational plans emphasize the importance of education as a factor of social and economic growth. In particular, it is being argued that high GNP growth rates will depend, to a large extent, on the availability of adequately qualified manpower.

For the first eight-year period of schooling, the overall rate of enrolment growth required to achieve full participation of the corresponding age group in four of the countries is foreseen to be modest over the period 1970-1980 (between 0.3 per cent and 1.3 per cent per year).(3)

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1) For example, the share of agriculture in total employment in Greece is expected to be reduced from 46.9 per cent in 1970 to 32.7 per cent in 1980. The Growth of Output 1960-1980, OECD, Paris, 1970.

2) GDP per capita in Greece is expected to increase from U.S. $700 in 1968 to U.S. $1,600 in 1980 (at 1968 prices and exchange rates); in Portugal from $500 to $1,000; in Spain from $700 to $1,200; and in Turkey from $300 to $500. (Estimates taken from The Growth of Output 1960-1980, OECD, Paris, 1970, p.81). For Yugoslavia, an estimate was made on the basis of an expected annual increase in GDP and an average annual rate of population growth of 1 per cent. Thus, per capita GDP in this country should increase from $450 in 1967 to $960 in 1980 (at 1967 prices).

3) The estimates for Portugal are based on a recent OECD enquiry on demographic trends which foresees a sharp decrease in the country's population over the period 1970-1980 due to migration. In their preparatory work for the IV Development Plan (IV/PF7, Portugal, 1970-1985), the Portuguese authorities foresee a higher rate of increase in enrolments in the first eight years of studies over the period 1970-1980 than that shown in Table 16 (2.3 per cent annually as against 0.9 per cent annually).

Enrolment ratios are already at satisfactory levels, while demographic pressure is expected to be low because of large emigration movement. Most of the effort at this level must be concentrated on increasing educational participation in the seventh and eighth years.

Unlike the other four countries, Turkey's high birth rate makes the realisation of an eight-year compulsory education between 1970 and 1980 very difficult. It is envisaged, therefore, that during this period full participation will be achieved for the first five years of compulsory schooling and a substantial improvement in the enrolment ratios will be made for the three subsequent years.(1) Even with these improvements, Turkey will continue to face a serious quantitative problem at the basic education level, although the rate of increase in enrolments is expected to be lower than that registered over the 1960s (4.8 per cent per year as against 6.6 per cent).

In upper secondary and higher education, the enrolment growth rates forecast for the decade 1970-1980 (Table 16) are generally high for the reasons mentioned above. In the case of Greece and Yugoslavia, enrolments in all upper secondary education (general and vocational) are expected to increase at the rate of 4.5 per cent and 4.2 per cent per year respectively and in university education at the rate of 3.6 per cent and 5.8 per cent per year respectively. Although still high, these rates are lower than those realised over the 1960s. In Portugal(2) and Spain, the growth of enrolments for these levels is expected to remain about as high as during the last five or ten years (i.e. 4.6 per cent and 8.8 per cent per year respectively in upper secondary, and 8.9 per cent and 10.7 per cent per year respectively in university education). These perspectives imply that the income elasticity of demand for educational services might be higher in countries such as Spain and Portugal which are reaching relatively high income levels but nevertheless

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1) See New Strategy 1973-1995, Ankara, February 1973, p.67.

2) In their preparatory work for the IV Development Plan (IV/PF 7, Portugal, 1970-1985), the Portuguese authorities foresee a lower rate of increase in enrolments in upper secondary education (2.5 per cent per year) over the period 1970-1980, due mainly to the provisions and requirements of the Reform for the transition from the old to the new system of education at this level. The estimates in Table 16 show a rather "normal" growth of demand over the same period (4.6 per cent per year, as was attained during the last five years).

have modest enrolment ratios for the 14-18 year age group. Greece and Yugoslavia are also reaching relatively high income levels, but the educational participation of the 14-18 year age group is, at present, higher. In Turkey, there have been very important increases in upper secondary and university education during the period 1960-1970, but this is explained to a large extent by the very low participation rates at the beginning of the period. For the year 1980, general income levels are expected to remain relatively low in spite of the rapid economic growth foreseen for this country during 1970-1980. Thus, enrolments are expected to increase fairly rapidly but at a lower rate than that realised during the 1960s (9.5 per cent per year in upper secondary and 5.6 per cent per year in university education as against 11.6 per cent and 8.6 per cent per year for the last decade). All five countries, of course, experience limitations in enrolment growth due mainly to the weaknesses which seem to persist, however small, in their social and economic structure (such as regional disparities in income and in social and economic infrastructure).

The proportion of non-university type higher education in total enrolments, at present modest (from 0.6 per cent in Greece to 2.2 per cent in Yugoslavia) (Table 6), is expected to increase considerably. In most of the countries it is a new and rapidly developing sector: enrolment growth rates in four of the countries are expected to reach between 7.7 per cent and 13.0 per cent per year (Table 16).

On the basis of the developments in primary and secondary education which have been discussed earlier, the following enrolment ratios have been worked out for age groups within the 6-18 year age bracket.

With regard to higher education (university and non-university type) total enrolments were related to total population: in Greece, the number of students per thousand population is expected to rise from 9.2 in 1969-70 to 14.9 in 1980; in Portugal, from 5.7 to 14.0; in Spain, from 8.2 to 18.5; in Turkey, from 4.5 to 6.2; and in Yugoslavia, from 12.7 to 18.4.

Due to lack of adequate information, it has not been possible, within the framework of this report, to evaluate the above developments in relation to other objectives of the long-term educational policies. The qualitative impact of these developments on the labour force could be examined on the basis of an

MRP type of analysis. The results of such an analysis, when compared with students' study preferences, could facilitate the elaboration of more specific, realistic educational targets and policies by broad category of discipline.

A further breakdown of total enrolment estimates for 1980 should be made by region and development centre. Such estimates should be based on a regional approach to educational problems. This form of analysis could facilitate a more complete diagnosis of the actual situation in the educational sector and the elaboration of educational investment and operational plans.

Finally, other policies aimed at the equalisation of educational opportunity (e.g. the application of a scholarship/free-board scheme) should also be defined quantitatively on the basis of an assessment of their future effects on the social structure of enrolments.

Table 17

ENROLMENT RATIOS
(Estimates for 1980)

Country	Age Group	1969	1980
Greece	6-13	91	100
	14-17	49	70
Portugal	6-13	84 (1)	100
	14-17	22 (2)	57
Spain	6-13	96 (3)	100
	14-17	32 (3)	58
Turkey	7-15	73	88
	16-18	17	31
Yugoslavia	7-14	94 (3)	100
	15-18	44 (3)	70

1) Age group 7-14
2) Age group 15-18
3) Year 1970.

EDUCATIONAL EXPENDITURE FORECASTS

To overcome existing shortcomings in the capacity of their educational systems and to meet additional demands for educational expansion, the five countries have planned for a rapid increase in educational expenditure in the years to come. In

Greece, total educational expenditure is expected to increase by 11.6 per cent per year (period 1968-1975); in Portugal, by 13.7 per cent (period 1969-1980); in Spain, by 5.8 per cent (period 1969-1981); in Yugoslavia, by 8.1 per cent (period 1970-1975).(1) These increases are higher than the target rates of increase in GNP which have been set in their development plans for a four- to five-year period or forecast for the decade 1970-1980 (5.5 per cent per year for Spain and around 7 per cent for all other countries).(2) Therefore, in the process of re-allocating resources for social and economic development, all countries have planned for the share of educational expenditure in GNP to continue to increase.(3)

These estimates, however, would need to be further elaborated in the light of an analysis of other factors which affect educational expenditure. Table 18(4), for example, shows the estimated increase in current educational expenditure which results from only two main factors:

i) major changes in the educational structure and in the number of enrolments.(5)

ii) improvements in the pupil/teacher ratios.(6)

The attainment of an eight-year compulsory education will constitute an important factor in the increase in expenditure, especially in Turkey and Portugal where enrolment ratios for

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1) Replies of the national authorites to the OECD Educational Growth Enquiry.

2) The Growth of Output 1960-1980, OECD, Paris 1970, p. 80. For Yugoslavia, cf. The Development Plan.

3) An analysis of the data of Table 11 reveals that the annual average growth rate of total educational expenditure over the 1960-1968 period was, in Greece, 1.55 times higher than that of GNP, 1.09 times higher in Portugal, 1.19 times higher in Spain, 1.70 times higher in Turkey and 1.16 times higher in Yugoslavia. Based on the above mentioned GNP growth rates foreseen for the decade 1970-1980, application of the same elasticities attained in the 1960s would result in average annual growth rates of total educational expenditure as high as some 10.8 per cent in Greece, 7.6 per cent in Portugal, 6.5 per cent in Spain, 11.9 per cent in Turkey and 8.1 per cent in Yugoslavia.

4) The analysis is based on constant 1969 prices. For the background information used in the construction of this table, see Appendix III to the present report, "Estimates of Current Educational Expenditure".

5) In the elaboration of enrolment forecasts, drop-out ratios were assumed either to remain the same or to be reduced.

6) The assumption here is that pupil/teacher ratios will not be higher in 1980 than the less favourable ratios prevailing at present in the advanced Member countries.

Table 18

ESTIMATED INCREASE IN CURRENT EDUCATIONAL EXPENDITURE RESULTING FROM ENROLMENT INCREASES AND ASSUMED IMPROVEMENTS IN THE PUPIL/TEACHER RATIOS(1)

AT 1969 PRICES

Millions of national currencies

	Expenditure	Greece	Portugal	Spain	Turkey	Yugoslavia
I.	Total Current Expenditure (1969/70)	4 850	4 660	35 315	2 642	5 690
II.	Increase in expenditure (1970/1980)	3 675	1 670	19 730	4 164	2 290(2)
	1. Due to structural changes and enrolment increases	(1 775)	(1 650)	14 255	3 343	(2 300)
	2. Due to improvements in the pupil/teacher ratio (based on current enrolments)	(1 900)	(20)	(5 475)	(821)	(- 10)
III.	Total (I + II) (1979/80)	8 525	6 330	55 045	6 806	7 980
	Average Annual Rate of Increase in Current Expenditure	5.8	3.1	4.5	9.9	3.2(2)
	Growth Rates of Total (Current and Capital) Educational Expenditure (1970-1980)(3)	11.6(4)	13.7	5.8	11.9(5)	8.1(6)

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1) See Appendix III.
2) 1970-1981.
3) See p. 57.
4) 1968-1975
5) As it results from the income elasticity of educational expenditure. See footnote 3 on p.58.
6) 1970-1975.

the 12-14 year age group are currently low. Since all countries have already reached full attendance at the primary education level, most of the enrolment increase expected will be in the first cycle of secondary education (or the second stage of the eight-year basic education). In fact, with greater participation at the upper educational levels, the overall structure of enrolment increases during the decade is changing and, as a result, the average expenditure per pupil is expected to be correspondingly higher.

Improvement in pupil/teacher ratios will be another factor leading to increased expenditure, especially at the primary level (with the exception of Yugoslavia which already enjoys favourable ratios). In secondary education, margins for further improvement appear to exist in Greece, Spain and Turkey; in higher education, in Greece and, to a lesser degree, in Portugal. In most cases pupil/teacher ratios are much more favourable in private schools than in public schools (see Table B in Appendix III). From Table 18 it can be seen that the annual rate of increase in educational expenditure resulting from enrolment increases together with improvements in the pupil/teacher ratios would alone represent a substantial part of the annual rate of increase foreseen in total expenditure. The difference between the two rates is an indication of the margins available to face capital requirements and the application of a wide range of policies announced in the development plans and reform schemes. Efforts to create a modern teaching force capable of playing a leading role in educational development and innovation must necessarily be associated with both higher expenditure for teacher training (expansion and re-organisation of teacher training institutions) and relative improvements in teachers' salaries (for higher qualifications and longer periods of study).

Policies designed to change the enrolment structure to ensure a relatively larger numbers of scientists, technologists and technicians in order to face development requirements for this type of qualified manpower might also lead to higher average costs per pupil. In these disciplines the pupil/teacher ratios must be among the most favourable; in addition, the unit costs for auxiliary personnel (laboratory assistants, etc.) and for space, equipment and maintenance are among the highest in the educational sector.

Important increases in expenditure are also expected to result from the extension of subsidy policies to cover at least the extended period of compulsory education. In Greece and Yugoslavia, free education for all is already in practice. In addition, policies aimed at reducing regional disparities in educational participation will be pursued on a larger scale while measures are provided to support the studies of those who lack opportunity. The extent of such measures is still limited, and their feasibility will have to be examined in the context of the broader social and economic questions.

There is very little information available concerning the present use of space and equipment, the condition of school buildings and the contribution of construction activities in recent years; as a result it has not been possible to calculate global estimates for fixed capital expenditure for the decade under consideration. The strong pressure on facilities which all educational systems have experienced during the 'sixties and the continuing rapid growth in enrolments indicate, however, that the five countries will be faced with the need to elaborate and implement vast investment programmes in the immediate future. The problem will be more urgent at university level where technical preparation and construction are long and cost per student is high.(1)

The urbanisation movement, expected to continue at a fast pace, is another factor in increased expenditure. Land prices, building costs, transport, etc. are rising rapidly, while the potential freeing of resources from the decreased pressure in the provinces is less marked. Probably one of the main reasons for this population movement is the lack of adequate educational facilities in the less privileged regions.

Most of the plans point to the need for reducing unit costs of education; possibilities seem limited, however, to particular items of the cost structure (e.g. unit costs of buildings). All plans agree that educational expansion should not take place at the expense of the quality of education: and it is very risky to assume that, under present conditions, economies in teaching staff (which account for the bulk of educational expenditure) or the intensive use of space and equipment would not lead to a deterioration in the quality of the educational services and, consequently, of the graduates from each level of the system.

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1) The construction cost of the University of Patras in Greece, for 6,000 students (most of them in science and technology), has been estimated at 44 million U.S. dollars, at 1968 prices. "University of Patras", OECD, Report by J.H. Heywood, Paris, May 1969.

The financing of educational expenditure varies from country to country. Generally speaking, in Portugal, Spain and Turkey the share of the household is larger than in Greece and Yugoslavia where education is free at all levels. The expansion of private schools in some of the countries (mainly at the primary and secondary levels) increases the burden of educational expenditure on family budgets. In Yugoslavia, the system is being radically revised with local authorities and communities and professional groups participating directly in the financing of educational activities.

Since there is no information available at the present time with regard to (i) revenue from student fees and (ii) direct contribution of local resources, the net contribution of the State Budget to educational expenditure cannot easily be estimated. It would also be important to know the yield of specific taxes which are earmarked for educational activities and the extent to which local authorities have the right to raise local money for school construction and operation. In turn, there is an expressed policy in many countries for the State to encourage local authorities and/or private enterprise, through loans and subsidies, to expand their activities in the field of education. The rapid increase expected in educational expenditure makes imperative the elaboration of policies to broaden or to mobilise new financial possibilities with reference to the potential yield of each source, i.e. State Budget, local authorities, private sector, households. To this end, it would be useful to establish a record of regularly supplied information in order that the analysis of the current system of educational financing might be made, as well as an examination of alternative systems together with the study of resource implications of educational development.

Chapter III

PRIORITY AREAS FOR LONG-TERM EDUCATIONAL DEVELOPMENT POLICIES

THE OVERALL STRATEGY PROBLEM

As already discussed in previous sections, the five developing Member countries during the 1960's experienced important changes in their social and economic structures: economic growth continued at a high rate; there was a rapid transition, linked with an accelerated movement towards urbanisation, from an agrarian to a more diversified economy; consumption patterns changed; and there was a growing demand for social services and pressure from the less privileged groups for a greater share in the benefits of progress. All these changes have given rise to serious new problems and have created new situations which have to be managed in new ways so as to draw the maximum benefit from past achievements and to ensure a steady development in the future towards a modern type of economy and society.

Within the framework of the development plans special emphasis is given to education in its role of serving a range of objectives wider than in the past; however, in connection with the extensive educational reform and development effort these countries plan to undertake, there are two important constraints which must be emphasized:

i) all five countries must continue to maintain high rates of economic growth while, at the same time, facing a strong demand pressure on resources for other components of social policy (social security schemes, health, etc.);
ii) the possibility of reducing unit costs of education is limited by the need to improve the quality of the educational services in the immediate future.

During the 1960's, the educational systems of all five countries had to face a strong pressure of numbers. Private demand was encouraged by measures taken to generate the growth process in education which, around 1960, was still lagging behind other sectors of the social system. This process took place, of course, within the general context of rapid economic growth and consequent changes in the social and economic structures of these countries which had a substantial impact on their patterns of consumption: families could afford for their children to enter employment at a later age and they were becoming able to spend more on education. At the same time, the expanding economy was in need of increasing numbers of qualified people in the labour force.

To face the above-mentioned developments, educational expenditure did grow faster than GNP and the increased financial resources thus made available have made possible, in some cases, the maintenance, and even the improvement, of the standards of the educational services in comparison to what they were at the beginning of the 'sixties. In other cases, however, the increase in the number of teachers did not keep pace with that of enrolments, and teacher/pupil ratios remain less favourable than in other Member countries. Plans for quality improvements in the teaching staff were not fully implemented, and in most of the five countries teachers colleges are still at secondary level: in many cases also the proportion of graduates in final-class enrolments was reduced and repeater and dropout ratios deteriorated. Educational institutions have become over-crowded, especially in the towns, and in many cases private demand had to be repressed, through rigid selection systems, to levels compatible to the extent possible with the capacity available at the time.

The general conclusion of the previous chapter is that the high growth rates foreseen for the 1970's are bound to sustain a strong private demand for educational services at the upper secondary and higher education levels;(1) the five countries will therefore continue to face significant quantitative problems in the years to come, while much remains also to be done in

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1) It is also evident that the countries will be faced with a growing demand for facilities at the pre-school and adult education levels, important sectors which it has not been possible to cover in the present analysis.

the direction of strengthening the qualitative capacity of the educational system through accelerated expansion of educational facilities, increase in the number and improvement in the quality of teachers, and the introduction and application of modern organisational methods and teaching techniques. While it is generally recognised that there need be no conflict between the pursuit of economic growth and social development and the satisfaction of individual demand, it is clear that, in view of the limited resources, giving full weight to all educational objectives simultaneously could lead to serious disturbances in the educational expansion process. Therefore, these countries are faced with a problem of strategic choices in the allocation of resources.

The Portuguese and Spanish plans do not propose procedures for resolving conflicting demands within the system. The Greek, Turkish and Yugoslav plans, on the other hand, seem to attach priority to those policies aimed at meeting qualified manpower requirements for development.

The manpower approach is a useful tool of analysis as a basis for policies aimed at avoiding imbalances between specific demands and supply of qualified manpower; it is of special importance for the developing Member countries in their efforts to mobilize human resources to accelerate development. However, this approach should not lead to a rigid type of planning in which the quantitative expansion of the educational system is determined by estimates of manpower requirements; this type of planning might result in the appearance of shortages in educational capacity, especially in periods of rapid increase in private educational demand and social change.

On the other hand, a policy of marked social character can also lead to disturbances in the process of educational growth (e.g. a lower rate of university expansion in order to provide more grants to students, etc.).

Because education is a sector almost entirely controlled by the State in these countries there is a serious risk that the work of planning becomes supply biased. In fact, there is little or no analysis of the magnitude and pattern of private demand for educational services as it changes under the relative influence of various independent socio-economic factors such as family size and income, employment opportunities, income disparities, demographic factors, urbanisation movements, etc.

The pressure of numbers has created a serious situation for the educational systems in most OECD countries calling for a straightforward approach in the assessment of educational growth problems and immediate action. These developments indicate that once supply conditions are given, private demand for education exercises an autonomous and direct pressure on resources.

In a free society, the individual cannot be coerced to adjust his choice of studies to the planners' wishes or to refrain from spending an increasing proportion of his income on education if he so desires; as the user of services offered by the educational system for his own benefit, he decides the length and type of studies he will undertake on the basis of his actual situation and future expectations. The role of the State should be that of assisting individuals to attain their goals under the best possible conditions. Since society's needs must also be met through education, a rational action for the State is an attempt through a policy of incentives to influence individuals to orient their aspirations in the desired direction.

The State has many powerful means at its disposal to influence the demand for educational services. It can impose entrance examinations in order to restrict the number entering specific schools; it can also set course standards so high that only the "best" students succeed in pursuing their studies. However, any "basic balance" achieved below aggregate private demand for education, as defined above, implies an accumulation from year to year of shortages in educational capacity which are bound to lead to undesirable situations and waste of resources. If the State fails to fulfil its role as the main supplier of educational services, the expansion of private schools might be a solution (in many countries a substantial part of private demand is met by private institutions). Alternatively, unsatisfied demand can result in students' leaving their home country to study in foreign educational institutions. Even more serious, the failure to mobilise the resources necessary for the educational system to accommodate normal demand might also lead to the admission of students in numbers which exceed the schools' capacity. (How long can the authorities refuse university admission to, say, 50 per cent of the total number of candidates?) Such an expansion, if it takes place at the expense of quality, would jeopardise the main objectives of educational development policies, including attainment of the standards of skills necessary for building up a modern economy.

Private demand for education is encouraged by the State through general subsidy policies (free education for all) and equality-of-opportunity policies (such as scholarships, loan funds, etc.). The more selective such policies are, the fewer the benefits to the privileged groups.(1) In any case, a time schedule has to be drawn up before such measures are implemented in order to permit the adjustments in the capacity of the system necessary to accommodate additional demand for educational services.

The extent to which additional resources will be made available for the application of policies of marked social character depends on the importance attached to education as a factor of social development. For example, preference could be given, in the context of income redistribution policies, to increased educational participation for low income groups rather than to other types of income transfers or subsidy policies.

Although private demand estimates should be the point of departure in setting targets for educational expansion, the elaboration of projections of qualified manpower requirements for development can play an important role in influencing students' study preferences. In addition, incentive policies which encourage individuals to opt for particular studies (easier admission to those disciplines required to accelerate development) can serve as a further means for obtaining a balance between individual interests and development needs. In many cases these incentives could be combined with policies to support educational participation of the less privileged groups (e.g. scholarships for students of low-income families in fields of study where there is a shortage of qualified manpower).

Viewed in this light, the manpower approach can offer a basic orientation for the desired breakdown of aggregate private demand, for changes in the structure of the educational system and for the diversification of curricula to meet development needs and technological change. Furthermore, the existence of surplus qualified manpower as a result of educational expansion policies can be an important incentive to private enterprise to

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1) "To increase the possibility of providing equal opportunity, persons who can afford to will be urged to contribute to expenditures made for their own education.": Turkish Plan, 1968 to 1972, p.175.

create new job opportunities insofar as these surpluses manifest themselves in areas relevant to development needs.

The situation, as outlined above, can be summed up as follows:

a) As a matter of priority, the public authorities have to face problems generated by the evolution of private demand; this means providing educational facilities for study in all fields of education and for all children who seek them and have the necessary ability.

b) The additional demand expected to be created by educational subsidies and by policies to equalise educational opportunity has to be evaluated in terms of additional expenditure and other resources so as to ensure a smooth process of educational expansion in the future.

c) Manpower projections are necessary in order to guide demand and educational policy/planning measures into areas relevant to development needs.

SPECIFIC ISSUES IN EDUCATIONAL STRUCTURES

The analysis clearly reveals the major changes in the structure of the educational system which have been taking place in all five countries under the pressure of numbers and socio-economic developments. A review of these developments shows that the pressure for structural mutations will continue in the future as a major policy concern in all five countries. The following problem areas emerge as those where pressures will be most strongly felt:

a) The extension of the period of compulsory education appears as one of the first and main steps in meeting both social and economic objectives. Analysis of recent educational developments indicates that in most countries the enrolment ratio for the corresponding age group (6-13 or 7-14) has already reached a satisfactory level and, therefore, full school attendance for this age group does not appear as a difficult target to be attained by 1980. The main problem, however, will be one of adjusting the nature of this basic education to make it relevant to the new objectives of the system.

This will call for a major effort in the re-organisation of the curriculum and in the training of teachers.

b) The re-organisation of upper secondary education has always been a crucial issue in the sense that the dispersion of educational activities at this level in several types of educational **institutions of different** standards and qualifications, responsible to various authorities, acted as a hindrance to the application of educational development policies for modernising the system while, at the same time, perpetuating and further intensifying disparities among the various social groups. This problem will need to be examined in conjunction with the needs of the economies of these countries for middle-level manpower. Therefore, the crucial problem at this level will be to devise structures which reflect an optimum combination of the specific needs of the economy and of the individual's right to a free choice between further study and employment, with effective arrangements for returning to education after some work experience and also training facilities within the world of work which would enable individuals to pursue their personal development and careers. This would indicate a flexible system of general and vocational education and training, linked to an overall concept such as that implied in a policy for recurrent education.

c) The rapid expansion of "polytechnics" or vocationally oriented short-cycle higher education institutions is a recent development in response to the pressure of individual demand for new studies and of the needs for higher qualified manpower in specialised professions. A clear policy regarding the purpose, status and organisation (study options, staffing, etc.) of such institutions as well as their relation to other institutions of secondary and university level has to be evolved if this new sector is to contribute effectively to a more balanced expansion of the entire educational system.

d) The major quantitative and qualitative problems which have arisen in these countries within the university sector can probably be faced better by the creation of additional modern universities in new localities, in conjunction with regional development plans, than by the expansion of existing ones. This would relieve the pressure of numbers on the old universities, thus improving the conditions for reforms in their organisation and operation, and would facilitate innovative experiments (new structures, institutional management techniques, research institutes attached to university departments, etc.).

Some of the five countries are already implementing, while the others are preparing, reform plans directed to the above needs. In this respect special attention should be given to the following areas:

a) the application of experimental and pilot schemes necessary to identify the specific problems arising out of the operation of the new schools;
b) the creation of a teaching force capable of responding to the new objectives of the new educational structure;
c) the reform of the educational administration and the staffing of competent services with personnel able to participate in, and interpret, the reform effort at the implementation stage.

EDUCATIONAL PLANNING TASKS

The development plans of the five countries concerned lay down in broad lines the principal aims which are to be served by education. Most often, however, little indication is given as to the feasibility of the proposals (a broad list of both general and special objectives and policies). Furthermore, as situations are rapidly changing, the information on which decisions are based must be continuously revised and supplemented. A flexible tool for this purpose might be found in the elaboration of a model for global quantitative estimates of a number of key variables of the educational system to be used for decision-making at the general policy level. Such a framework, in turn, could serve in discussing priorities for parallel or more detailed planning work, specific research and the programming of operational activities to be undertaken by the various government agencies at central, local and institutional level.

More specifically, resource implication studies would need to be undertaken with a view to arriving at total costs for the implementation of the reforms: overall national growth objectives would need to be taken into account and educational targets incorporated explicitly into the overall national plans and programme budgets. It is also imperative to re-examine the mechanisms of financing educational activities in order to consider the development of new approaches for financing the desired rate and pattern of educational expansion, taking into account the financial possibilities and financing mechanisms of the whole socio-economic system.

Successful planning work must, in any event, be based on a wide range of information in the form of basic statistics and indicators or specific studies which illuminate important aspects of the development and operation of the system. However, in the five countries under study, a consistent, interrelated body of educational statistical data, collected regularly by competent agencies, is still not available, even in important areas such as student flows, educational expenditure by level and branch, etc.(1)

To redress the balance towards more demand-oriented planning, surveys and analysis of students' study preferences would provide a useful basis for setting specific targets by level of education and discipline, enriching the range of study options and helping to determine incentive policies to meet development requirements in qualified manpower.

The manpower aspect of educational growth continues to be an important factor in the developing Member countries. Within the framework of the Mediterranean Regional Project, a methodology was developed ten years ago for forecasting manpower requirements for economic development. Studies of this type may need to be repeated or reviewed at regular intervals in order to assess changes in the supply of and demand for qualified manpower: they would need to be checked against the private demand surveys discussed above. The application of other techniques for short-term planning and forecasts, e.g. industry demand surveys, in order to determine eventual mismatch with the supply of qualified manpower is also necessary as a complementary tool to more traditional manpower forecasting.

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1) Suggestions for a set of statistics to be used as basic statistical information for facilitating decision-making at the general policy level are included in the statistical appendix to this report.

Finally, *regional and local educational planning aspects* must also be considered if a balanced distribution of educational investment and activities is to be obtained. In view of the accelerated urbanisation movement and accompanying urban development problems, priority might be given to regional analysis and physical planning in connection with the changing demand for educational services and educational capacity in the larger towns or cultural centres.

During the 'sixties, all the developing Member countries, some for the first time, drew up long-term development plans to deal with the large number of growth problems they faced. It would be of interest if special reviews or studies were undertaken in order to examine:

i) *the relationship and coordination of educational planning to the countries' overall socio-economic effort*;
ii) the mechanisms and procedures by which educational plans are prepared;
iii) the type and degree of participation of those agencies or groups which are involved in educational activities;
iv) the relation of the planning machinery to the decision-making process; and,
v) the methodological problems which arise.

The experience acquired from the planning procedures of the past and from the subsequent problems of implementation should lead to improvements in the planning mechanisms, especially in a *strengthening of the practical value* of planning so as to make it a more effective tool of long-term educational development policies.

Appendix I

THE STATISTICAL FRAMEWORK

STATISTICS FOR POLICY-PLANNING IN THE EDUCATION SECTOR

The tables included in this Appendix were designed in an attempt to provide a structural framework of educational statistics and indicators as a basis for the elaboration of periodic educational growth reviews. Such reviews can be used for facilitating decision-making at the general policy-planning level, i.e. on general education objectives, key issues and long-term development policies.

These types of decisions cannot be taken piecemeal; the feasibility of each of them should be assessed against other decisions taken at the same level if a balance is to be ensured in meeting a wide range of objectives. Statistical work, therefore, should facilitate the identification of the major problems in the field of education and the assessment of their relative importance as against educational goals and available resources in order to determine the type and magnitude of the effort to be undertaken, over a pre-determined period of time, for educational development.

The set of decisions taken at the general policy level constitutes the general framework within which detailed research work, specific studies and the programming of the numerous operational activities will be undertaken by various agencies at the central and/or local and institutional levels. The set of educational statistics proposed here will refer only to the overall educational policy/planning work; information sub-systems geared to the global model will serve the more specific work required for the implementation of the general policy decisions.

The importance attached to education as a multi-purpose activity and the power of the State to influence educational developments should not lead to a supply-biased educational policy planning. Education is a sector of services supplied by public and/or private institutions to individuals who seek education to fulfil *their own goals*. The quantitative and qualitative standards of the educational services are related mainly to input factors such as *teachers* and other personnel, *buildings*, *equipment*, and other goods, i.e. all items included in the cost structure of the educational services as defined by the System of National Accounts (UN-OECD).(1)

In fact, the body of statistics proposed here includes data describing developments in the size and pattern of private demand and in the supply of educational services. These data could also give evidence as to the *effectiveness* of the system in meeting this demand. Moreover, to take into account other major areas of *policy* concern this set of statistics can facilitate the working out of a number of indicators of the performance of the system as against the general goals of educational development (manpower aspect of educational growth,(2) reduction of regional and social disparities). Finally, account is taken of the need to provide the basic material for the elaboration of models of global quantitative estimates of a number of key variables of the educational system over long-term periods in the future, including the assessment of resource implications of alternative targets of educational growth.

Because of the *high degree of aggregation needed* in the synthesis of such types of study, the statistical basis suggested here might as well be used for gross comparisons at international level.

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1) At this stage of the statistical effort, consideration of other inputs, such as student participation in the educational process, opportunity costs of student time, etc., is left to specific surveys or studies; their importance for general policy decisions or planning purposes is not ignored, at least as factors influencing the evolution of the basic magnitudes of the educational sector.

2) Information is provided both for following up the trends in specific demand for educational services (i.e. by field of study) and also for facilitating an analysis of production-manpower-education relationships.

Thus, in the following paragraphs reference is made to the statistical tables(1). presented by country at the end of this Appendix, with regard to the following main areas of policy/planning concern:

i) data which illustrate the relation of educational levels to overall objectives;
ii) data which describe the nature and size of educational growth;
iii) data on resources for education;
iv) indications on data needed for forecasting purposes.

A final section refers to classification problems and suggests practical categorisation relevant to policy/planning purposes.

It should be noted here that for several tables included in the initial questionnaire information was not available It has thus been necessary to reduce their number (mainly by eliminating further breakdowns of the basic tables) to what could be considered as the minimum required for a body of basic educational statistics. Nevertheless, some tables could not be completed; they are presented in this Appendix, however, for the purpose of suggesting a priority for future statistical work.

INDICATORS OF EDUCATIONAL PROGRESS IN RELATION TO THE GENERAL OBJECTIVES OF THE EDUCATIONAL DEVELOPMENT POLICIES(2)

These indicators would help towards a first appreciation of situations in terms of educational goals. Moreover, when related or compared to other socio-economic magnitudes, they

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1) These tables refer to the magnitudes of the educational system itself. Needless to say, for the purpose of this review use was also made of data relevant to other parts of the socio-economic system necessary for the analysis of educational developments (such as demographic, labour force statistics, national accounts, etc.) which, however, are incorporated in other sets of statistics.

2) At national level. For regional development policies the same set of statistics proposed here could be used for the collection of data by region.

could draw the attention of policy-makers to adjustments or changes required to ensure a balanced growth of education and the other sectors, thereby avoiding future bottlenecks.

The following list is not exclusive of other indicators which could be examined in the context either of a broader system of socio-economic indicators or of the analysis of demand for educational services (e.g. interplay between housing conditions in one area and education). The purpose in this paper, however, is to attempt a selection of what could be considered as strategic indicators. For the same reason, no reference is made here to partial systems of indicators related to special subordinate problems which can be the subject of specific studies.

a) Enrolment ratios: Table I includes data by school-age and level of education.

b) The educational structure of the labour force: Tables XI and XIa on holders of higher education diplomas (by sector of economic activity and educational discipline). Up-dating of this table can be made every year through either sample surveys or estimates of the net increase in the number of holders of diplomas (number of additional graduates less replacement for deaths, emigration and retirement). Similar data on the stock of educated people can be collected for other educational levels as well.

c) Social disparities in educational participation: Table IX on distribution of students by father's profession. These data can be collected on an annual basis, as every student declares his father's profession when registered with the school.

d) Regional disparities in educational participation: Table X on distribution of students by large towns or regions of their parents' residence. As in the case of (c), such data can be available on an annual basis.

e) Final consumption expenditure and fixed capital formation in education, in relation to other general government and overall outlays: The OECD National Accounts Division recently (1971) began collecting these data for education on an annual basis.

Census data can yield information on illiteracy ratios in the case of countries where this problem is still of importance.

DATA ON EDUCATIONAL EXPANSION

The following type of statistics is proposed for presenting the main features of the evolution in educational demand (and the trends in the supply of qualified manpower) and for relating it to the movement of other magnitudes of the socio-economic system (income elasticities of enrolments, changes in the ratio of employed people of school age to the corresponding population age group, etc.).

a) Enrolments by educational level: Table II can help in working out growth rates by level of education and in identifying the changes in the structure of enrolments. A further breakdown of this table is being made for the following purposes:

i) to show the evolution of female participation in enrolments,

ii) to show the relative role of the private sector in covering part of the demand for educational services.

b) Number of candidates, new entrants and enrolments in higher education, by field of study: The purpose of Tables IIIa (university education) and IIIb (non-university type) is to supply evidence as to the trends in specific demands for educational services (e.g. enrolments in or demands for science and technology as against other disciplines). More specifically, these trends can be compared with the desired evolution of education in relation to socio-economic development needs.

It would also be of interest to show the stock of unsatisfied demand (where entry restrictions are applied) and/or the number of candidates who sit entrance examinations for the second or third time.

c) Number of students studying abroad and foreign students in national universities: Table V can help in indicating the changes in demand for educational services (at higher education levels) which is channelled abroad and in foreign demand in the country concerned (to be taken into account in expanding the capacity of the system).

d) Number of graduates by educational level: Tables VI, VIa and VIb show the output of the systems; they can help in indicating changes in the structure of graduates and in the stock of educated people in order to compare with labour market conditions and long-term perspectives for qualified manpower.

e) Transition coefficients by educational level: These can be derived from Tables VI, on Graduates, and Table III, on New Entrants.

DATA ON EDUCATIONAL RESOURCES

The next step is to describe how educational expansion is met, i.e. changes in educational resources in relation to the evolution in demand.

a) Educational expenditure: Table VIII shows expenditure by agent of educational development, major cost item and level of education. It can indicate the changes in the structure of expenditure and relate these changes to the evolution in the number of enrolments and teachers.

b) Teachers: Tables VII and VIIa show the number of full-time and part-time teachers by sector - public and private - and level of education so that changes in their numbers can be compared with the corresponding changes in enrolments. A further breakdown of Table VII has been made to show the number of teachers by field of specialisation, as a basis for the analysis of present and future requirements in teaching staff.

c) Basic relationships with quality implications
The following group of ratios might offer some elements for a first evaluation of the operation of the system:

i) Graduates as Percentage of Last Year Enrolments (Can be derived from Table IIc, showing enrolments in the last year of each educational level or branch, and Table VI on the number of graduates).

ii) Repeaters in the First Year as Percentage of First Year Enrolments (Can be derived from Table IIc, showing enrolments in the first year of each educational level, and Table III on New Entrants).

iii) Number of Students abandoning their Studies, as Percentage of Total Enrolments (Can be derived from the combination of Tables II, on Enrolments, Table III, on New Entrants, and VI, on Graduates: Enrolments in previous year + New Entrants - Graduates in previous year - Enrolments in current year).

iv) The Proportion of Pupils above Normal Age in Total Enrolments, by Educational Level (Can be derived from Table I).

v) Pupil-Teacher Ratios (Can be derived for both public and private sectors from the above-mentioned tables, on Teachers and Enrolments).

A rough indication of the situation with regard to educational facilities can be had, for primary and secondary education, from data on the number of classrooms and of pupils per classroom, on the condition of school buildings (new, adapted, rudimentary) and on the increase in space over a given period of time. For the higher education institutions (universities, teachers colleges, etc.) however, it would be more realistic to have information on the increase in capacity (in terms of the number of students to accommodate) either of the existing institutions and/or from the construction of new units, in order to compare with the increases in enrolments.

FORECASTING

The above set of educational statistics describes situations in key areas around which policy discussions should take place during the target-setting process. It can be used for testing the basic assumptions and working out estimates of the extent and pattern of educational expansion in the future and for rapidly assessing the feasibility of major educational initiatives under consideration.

Statistical work should be related to the following stages of the planning procedure:

a) Following the description of the system and of the changes which occurred in the past, as suggested in the previous sections, estimates should be made of private demand for educational services in the future on the basis of its current development under the influence of independent socio-economic factors.

b) A second step should be that of evaluating the developments foreseen, as above, against the policies envisaged to meet educational goals and to assess the desired changes in private demand to respond to these policies.

c) The resource implications of alternative educational growth targets should be examined and related to the overall national growth targets and forecasts of total resources to be made available for social and economic development.

To meet the basic requirements of the above work, the following information can be derived from the proposed set of statistics:

a) Student flow data

i) The evolution of enrolments by level of education (Enrolments at year X = Enrolments in the Previous Year, Less Graduates in Previous Year, Less Number of those who Abandon Studies, Plus New Entrants) can be obtained by the combination of Tables II, on Enrolments, VI, on Graduates, and III, on New Entrants. The net number of those who abandon their studies every year can be obtained as indicated in the preceding section under (c) (iii).

ii) The flows of students from one level to another can be obtained from Table VI, on Graduates, and Table III, on New Entrants.

Data on the school-age population and demographic projections by age should be available from other competent sources; it would be useful, however, if they were also included in the set of educational statistics.

b) Private demand trends

Transition coefficients and the structure of enrolments might change in the future under the influence of various socio-economic factors on private demand for education.

A first indication of the existing margins of expansion of educational demand, especially at primary and secondary levels, is the difference between present enrolments and the projected total number of children in the corresponding age groups. Other indications are given by the type of information proposed above (social and regional disparities, female participation in education, number of candidates by field of study, etc.). For the expected rate of increase in enrolments, a number of basic assumptions can be made in relation to expectations as to the changes in the general social and economic conditions (population structure, income levels and disparities, employment of school-age population, qualified manpower demand, etc.).

All these assumptions should, of course, be tested by more detailed demand studies based on family budget surveys, student study preference surveys, studies on women's participation in education, regional studies, etc. which can be prepared at longer intervals.

c) Policy interventions

Governments might intervene and influence educational developments both in their effort to provide, as suppliers of educational services, the necessary facilities to meet educational demand as it actually develops and/or to manage demand in line with the goals of educational development. To this end, the procedure suggested above could help the planning authorities to identify key areas where State intervention is necessary. Thus, demand can be encouraged for fields of study where manpower is short; educational expansion can be fostered in regions with lower educational participation; but strict entrance examinations can repress demand for certain fields or educational levels, and so on. Thus, alternative rates and patterns of educational expansion, based on an assessment of the effects of State intervention on the evolution of educational demand, can be proposed for the choice of policies and targets of educational growth in the future.

d) Resource implications

Proposals for future policies to meet private demand for education and to meet other qualitative aspects of educational expansion should be presented with estimates of resources required, over a certain period of time in the future, for their implementation.

The information which might be produced on pupil/teacher ratios, space per pupil and expenditure by major item of the cost structure as suggested above can help to assess rapidly the implications of educational expansion in terms of human and financial resources (a) from the expected increase in enrolments, and (b) from changes in the quantitative standards of the educational services (e.g. improvement in pupil/teacher ratios).

Here again, specific studies on costs of education (per pupil, teacher, space and/or construction costs per unit of educational institutions, such as universities, technical schools, etc.), on financing of education, on teachers' wages, etc, can furnish important material both for testing the estimates outlined above and for preparing subsequent detailed programming and project implementation.

CLASSIFICATION PROBLEMS

Once the objectives are given for the elaboration of a set of statistics, problems of definitions and classification have to be solved with regard to the items to be included in the relevant tabulations. These problems have already been treated in previous methodological work by the OECD Secretariat (e.g. *Methods and Statistical Needs for Educational Planning and Classification of Educational Systems*), while many practical problems connected with the utilisation of national statistics have been dealt with in several other OECD educational studies and reviews based on statistical analyses.(1)

The important issue, however, which has to be considered here is the main structure of the educational system to be adopted as the basis for the collection and presentation of the statistics.

At present, national statistics by educational level are presented for *pre-primary*, *primary*, *secondary* (general and technical) and *higher* education. More detailed information is presented in the form of breakdowns of the above categories, while the need is recognised to present separate data for *non-formal education*. Of particular importance in discussions on policies for post-secondary education has been the work of the OECD Secretariat in connection with the classification and presentation of data for the *non-university sector of higher education* (or *short-cycle* higher education), including the classification of data for all higher education by field of study.

In addition to the above change in the structure of educational statistics, which has covered the entire higher education sector, the trend is now to consider the first eight

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1) e.g. *Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries*, OECD, Paris, 1969; *Group Disparities in Educational Participation*, OECD, 1971; *Study on Teachers*, OECD, 1968; *Quantitative Trends in Teaching Staff in Higher Education*, OECD, 1971; *Development of Higher Education 1950-1967*, OECD, 1970.

or nine years of studies (primary education plus the first cycle(1) of secondary) as an overall stage of "basic education". It is becoming an expressed policy in all Member countries that all children between the ages of 6 and 13 or 14 (or 7 and 14 or 15), which corresponds to a minimum of 8 to 9 years' compulsory education, receive the same type of mainly general studies (either in one comprehensive school or in two subsequent cycles), while upper secondary education is subject to separate treatment to perform the double function of preparing students for specialised vocations and for higher education. As pre-school education is still treated as a separate issue in most Member countries, a specific category for it is proposed. Non-formal education is of growing importance in all Member countries, but more developmental and analytical work is required before a firm classification system for it can be proposed.(2)

For the purpose of this review, the "basic education" level appears only in the presentation of enrolment forecasts and of educational expenditure. But, for the follow-up of developments at this level (to take into account the specific country policies), the statistical tables refer to the present structure in each country. For the upper educational levels, however, the OECD Classification of Educational Systems was applied.

The statistical tables by country are preceded by a note which makes reference to any particular classification and definition problems.

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1) When this first cycle of secondary education is not incorporated in an eight-year school of basic studies.

2) It is thus suggested that the basic structure of educational statistics would refer to the following categories:

I. Higher Education:

1. University type;
2. Non-university type

II. Secondary Education (Upper):

1. General
2. Technical and Professional

III. Basic Education:

1. Primary
2. First cycle of secondary

IV. Pre-School Education

In addition to policy considerations, the above structure can better facilitate international comparability, at least as regards aggregate figures, and makes easier the utilisation of national statistics.

STATISTICAL TABLES

GREECE

EDUCATIONAL CLASSIFICATION

The following educational levels (and fields of study) are presented by reference to the "conversion key" for Greece (OECD classification):

1. Primary education

The first six years covering compulsory education (pre-primary education is separate from primary education as thus defined).

2. General secondary education

Education provided in:

- Six-year courses in "Gymnasia".
- The "Scholai ecclessiastikai" (religious schools) except for "Ecclessiastika phrontistiria" (course covering the two terminal years) which are classified as non-university type higher education.

3. Technical and vocational education

All the technical and vocational schools ("Technike" = technical, "Agrotikai" = agriculture, "Emborikai" = commercial, "Oikiakis Oikonomias" = domestic economy, "Parochis Koinonikon Ypiresion" = social services, "Kallitechnikis Ekpedefseos" = fine arts). The following are not included:

Those which are classified as non-university type higher education.

- "Anoterae Technicae Scholae" (Technical colleges).
- "Emboroploiarchon" (Training of merchant marine officers).
- "Koinonikon Ypiresion" (Higher social service colleges).

- "Ploiosynodon" (Guide interpreter schools).
- "Ecclessiastika Phrontistiria" (Course for the two terminal years of ecclesiastical school).

Those which are classified under general secondary school education.

- "Scholai ecclessiastikai" (Ecclesiastical schools).

4. Teachers colleges

All teacher training colleges ("Paidagogikai Acadimiae").

5. Non-university type higher education

- All technical and vocational schools listed in paragraph 3 as non-university type higher education.
- SELETE: Teacher training college ("Scholi Ekpedeftikon Litourgon Epangelmatikis Technikis Ekpedefseos" = technical and vocational teacher training colleges).
- SELETE civil engineering colleges for teachers of technical subjects.
- "Ethniki Akadimia Somatikis Agoghis" (National Academy of Physical Education).
- "Anotati Scholi Kalon Technon" (Academy of Fine Arts).
- "Scholi Nipiagogon" Kallithea-Athens (Teacher-Child Welfare Training Schools).
- "Scholae Oikiakis Oikonomias" Kallithea-Athens and Canee-Crete (Schools of Domestic Economy).

6. University type higher education

- All universities: University of Athens, of Thessalonica, of Patras, of Jannina, Technical University of Athens ("Ethnikon Metsovion Polytechnion").
- "Anotati Scholi Oikononikon ke Emborikon Epistimon" (Higher College for Economic and Commercial Sciences).
- "Panteios Anotati Scholi Politikon Epistimon" (Higher College of Political Sciences).
- "Anotatae Viomichanikae Scholai" Piraeus and Thessalonica (Colleges of Advanced Industrial Studies).

- "Anotati Geoponiki Scholi" Athens (Higher College of Agriculture).

NOTES ON THE TABLES

Table I: Enrolments by educational level and year of age and enrolment ratios

Enrolments for children age "X" represent the number of children who had attained that age at the beginning of the school year.

Table III.a: University type higher education: number of candidates, new entrants and enrolments by field of study

(The following definitions which apply to Table III.a, university type higher education, may be adapted to other tables in which the defined terms are used.)

- Candidates: all persons seeking admission to university type higher education.
- New entrants: first-year students registered for the first time.
- Field of study: the OECD classification of higher education by field of study is given on the next page.

Table IX: Distribution of university students by father's profession

The seven occupational groups shown in this table correspond to Major and Minor Groups of the International Standard Classification of Occupations (see p. 254).

Table XI: Education by sector of economic activity: number of persons with university diplomas by field of study

The grouping by sector of economic activity is based on the International Standard Industrial Classification of All Economic Activities (ISIC) (see p. 255).

CLASSIFICATION OF HIGHER EDUCATION
BY FIELD OF STUDY

	OECD Classification
- Theologia (Theology)	Humanities
- Nomika (Law)	Law
- Politike ke ikonomike epistime (Political Science and Economics)	Social Sciences
- Iatriki (Medicine)	Medical Sciences
- Odontiatriki (Dentistry)	Medical Sciences
- Farmakeftiki (Pharmacy)	Medical Sciences
- Filologia (Greek Literature)	Humanities
- Istoria - Archeologia (History-Archaeology)	Humanities
- Spoude archeotitos - Classike spoude (Classical Greek Studies)	Humanities
- Bizantine ke messeonike spoude (Byzantine and Mediaeval Studies)	Humanities
- Spoude Neoterou ellinismou (Studies of Modern Greece)	Humanities
- Galliki glossa ke filologia (French Language and Literature)	Humanities
- Angliki glossa ke filologia (English Language and Literature)	Humanities
- Germaniki glossa ke filologia (German Language and Literature)	Humanities
- Italiki glossa ke filologia (Italian Language and Literature)	Humanities
- Fisiki (Physics)	Pure Sciences
- Chimia (Chemistry)	Pure Sciences
- Fisiognosia ke geografia (Geophysics and Geography)	Pure Sciences
- Biologia (Biology)	Pure Sciences
- Geologia (Geology)	Pure Sciences
- Mathimatiki (Mathematics)	Pure Sciences
- Ktiniatriki (Veterinary Medicine)	Agriculture
- Geoponiki (Agriculture)	Agriculture
- Dassologia (Forestry)	Agriculture
- Politiki Michaniki (Civil Engineering)	Technology
- Michanologia-electrologia (Mechanical and Electrical Engineering)	Technology
- Architectoniki (Architecture)	Architecture
- Chimiki Michaniki (Chemical Engineering)	Technology
- Metaliologia - metalourgia (Mining and Metallurgy)	Technology
- Agronomia-topographia (Agronomy and Land Surveying)	Technology
- Ikonomike epistime (Economics)	Social Sciences
- Emborike epistime (Commercial Studies)	Social Sciences

	OECD Classification
- Politike epistime (Political Science)	Social Sciences
- Dimosia diikisis (Public Administration)	Social Sciences
- Biomichanike spoude (Industrial Studies)	Social Sciences

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Table I

ENROLMENTS(1) BY EDUCATIONAL LEVEL AND YEAR OF AGE
AND ENROLMENT RATIOS (1968-69)

Thousands

Year of Age	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	University	Total enrolments	**Population of age group at 1.1.1969**	Enrolment ratios (%)
5	37.0						37.0		
6	138.3						138.3	146.6	94.4
7	139.1						139.1	145.2	95.8
8	147.2						147.2	155.1	94.9
9	146.9						146.9	146.3	100.0
10	143.9						143.9	142.9	100.0
11	140.9	1.3	0.1				142.3	145.1	98.1
12	37.1	73.5	4.3				114.9	145.8	78.8
13	12.2	78.0	6.5				96.7	148.6	65.1
14	3.4	71.0	7.9				82.3	144.2	57.1
15		60.7	8.5				69.2	136.6	50.6
16		58.0	8.7				66.7	141.8	47.0
17		48.4	9.0				57.4	143.5	40.0
18 & over		(30.8)	33.6	2.7	9.3	71.0	141.4		
18		16.9	...	0.54	...	6.0			
19		5.8	...	0.82	...	9.5			
20		4.8	...	0.55	...	11.1			
21		3.3	...	0.30	...	10.7			
22			...	0.20	...	8.5			
23			...	0.14	...	6.3			
24			...	0.07	...	4.6			
25			...	0.04	...	2.9			
26			..	0.02	...	1.9			
27 & over			...	0.03	...	9.5			
Total	946.0	421.7	78.6	2.7	9.3	71.0	1,529.3		

Source: For enrolments: Statistical Yearbook for Education 1968-1969
For population: Demographic Trends in Greece, 1950-1980, Ministry of Co-ordination, 1969, p.233

1) Not including: - primary night schools (12,517 pupils)
- special art schools (7,589 pupils)

GREECE

Table II

ENROLMENTS

Year	Primary	Secondary General	Technical and vocational(1)	Teachers' Colleges	Non-university type higher education	University	Total enrolments
1959-60	927,331	260,492	47,547	2,384	2,618	23,847	1,264,219
1960-61	912,262	274,538	48,870	2,314	2,819	25,549	1,266,352
1961-62	927,853	292,446	58,178	2,256	3,451	27,927	1,312,111
1962-63	928,717	318,900	57,310	2,649	3,756	31,811	1,343,143
1963-64	924,701	327,833	59,569	2,832	4,220	39,584	1,358,739
1964-65	965,782	359,320	67,189	2,906	4,981	49,262	1,449,440
1965-66	975,869	375,536	71,778	2,857	9,729	53,980	1,489,749
1966-67	979,395	389,216	81,169	3,107	9,219	60,383	1,522,489
1967-68	973,912	424,635	84,069	4,307	11,113	67,971	1,566,007
1968-69	960,812	422,205	86,357	2,696	9,253	70,981	1,552,304
1969-70	948,091	437,535	93,696	2,524	11,702	72,362	1,565,910
1970-71	923,754	456,408(2)	...	2,794	...	...	...
1971-72	908,180	488,021(2)	...	2,473	...	...	...

1) Courses of very short duration are not included.

2) Not including religious schools (Scholai ecclesiastikai).

GREECE

Table II.a

NUMBER OF STUDENTS IN PRIVATE SCHOOLS

Level of Education	1959-60	1969-70
Primary	65,586	67,064
Secondary General	42,326	52,910
Technical and Vocational and non-university type higher education	35,258	65,432 (1)
Teachers' Colleges	-	-
University	-	-

1) 1968-1969.

GREECE

Table II.b

NUMBER OF FEMALE STUDENTS IN PUBLIC AND PRIVATE SCHOOLS

Level of Education	1959-60	1969-70
Primary	441,382	453,282
Secondary General	106,200	199,717
Technical and Vocational	8,572	13,527 (1)
Teachers' Colleges	1,111	1,144
Non-university type higher education	1,994	2,872 (1)
University	5,376	22,690

1) 1968-1969.

GREECE

Table II.c

ENROLMENTS IN THE FIRST AND THE LAST YEAR OF STUDIES

Level of education	1959-60		1969-70	
	First Year	Last Year	First Year	Last Year
Primary	164,853	142,389	162,673	164,537
Secondary General	70,300	23,427	100,081	48,137
Technical and Vocational	..	..	27,275	14,120
Teachers' Colleges	1,247	1,137	1,329	1,195
Non-university type higher education	..	..	4,096	2,632
University	7,340	4,494	19,366	13,514

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Table III

NEW ENTRANTS

Year	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-University type higher education	University
1959-60	138,813	61,130	21,647	1,208	1,082	6,081
1960-61	144,997	59,276	21,857	950	1,210	7,112
1961-62	146,352	59,000	...	1,201	...	6,840
1962-63	149,688	63,076	...	1,330	...	9,613
1963-64	147,379	66,608	...	1,346	...	11,476
1964-65	186,519	94,243	...	1,849	...	20,749
1965-66	157,106	86,281	...	1,318	...	13,441
1966-67	152,663	91,526	...	1,556	...	12,471
1967-68	142,534	86,480	...	1,596	...	17,377
1968-69	142,850	84,613	...	1,174	...	13,009
1969-70	145,334	90,300	...	1,201	...	12,397
1970-71		103,064				

GREECE

Table III.a

UNIVERSITY TYPE HIGHER EDUCATION:
NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Pure Science		4,466	641	1,820	1,645	8,651
Architecture		4,402	115	179	416	1,186
Technology			396	692	1,726	4,446
Agriculture		1,217	246	665	1,013	4,043
Total Science and Technology		10,085	1,398	3,356	4,800	18,326
Medical Sciences		7,771	822	1,906	3,976	12,090
Humanities		5,112	834	1,929	3,456	8,485
Education		-	-	-	-	-
Fine Arts		-	-	-	-	-
Law		6,550	780	952	3,823	10,116
Social Sciences		7,256	2,247	4,254	7,792	23,345
Other		-	-	-	-	-
Total	...	36,774	6,081	12,397	23,847	72,362

GREECE

Table III.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70 (1)
Pure Science		-	-	-	-	-
Architecture		-	-	-	-	-
Technology		4,683	-	1,827	-	5,778
Agriculture		-	-	-	-	-
Total Science and Technology		4,683	-	1,827	-	5,778
Medical Sciences		...	530	...	1,215	1,578
Humanities		...	138	...	279	164
Education		...	137	243	366	713
Fine Arts		...	30	90	106	278
Law		...	-	-	-	-
Social Science		...	247	...	652	742
Other		-	-	-	-	-
Total	...	...	1,082	...	2,618	9,253

1) 1968-69

GREECE

Table IV

HIGHER EDUCATION: NUMBER OF FEMALE STUDENTS BY FIELD OF STUDY

Field of Study	University		Non-university type higher education	
	1959-60	1969-70	1959-60	1968-69
Pure Science	223	1,606	-	-
Architecture	197	481	-	-
Technology	38	264	-	352
Agriculture	68	540	-	-
Total Science and Technology	526	2,891	-	352
Medical Sciences	929	3,414	1,215	1,541
Humanities	1,737	5,836	-	-
Education	-	-	283	397
Fine Arts	-	-	43	153
Law	1,017	3,828	-	-
Social Science	1,167	6,721	453	429
Total	5,376	22,690	1,994	2,872

GREECE

Table V

HIGHER EDUCATION: FOREIGN STUDENTS IN THE COUNTRY AND NATIONALS STUDYING ABROAD BY FIELD OF STUDY

Field of Study	Foreign students		Nationals studying abroad	
	1959	1969	1959	1969
Pure Sciences	174	981	..	893
Technology	194	816	..	4 510
Medical Sciences	254	1,041	..	1,683
Other	710	3,110	..	1,550
Total	1,332	5,948	..	8,636

GREECE

Table VI

GRADUATES

Year	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	University
1959-60	139,467	18,347	9,196	1,128	1,112	3,887
1960-61	133,509	19,950	9,909	1,228	1,225	3,857
1961-62	132,796	22,869	11,189	988	1,152	4,064
1962-63	137,905	24,929	9,269	1,240	1,204	4,251
1963-64	138,404	28,297	10,260	1,422	1,233	4,311
1964-65	133,540	32,109	12,323	1,466	1,512	4,530
1965-66	137,102	34,217	11,726	1,430	1,820	4,577
1966-67	139,221	33,629	12,191	-(1)	1,571	4,951
1967-68	143,274	35,419	13,889	2,393	1,969	6,112
1968-69	144,161	37,958	16,130	1,384	1,522	7,708
1969-70	163,490	42,310		994		7,933

1) Duration of studies in Teachers' Colleges was extended in 1966 from two to three years.

Table VI.a

GREECE

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967 68	1968-69	1969-70
Pure Science	294	313	338	355	392	355	590	612	780	1,080	1,191
Architecture	57	53	72	72	73	106	104	131	164	221	248
Technology	239	273	355	375	361	345	406	471	698	868	679
Agriculture	111	100	147	163	165	207	161	225	394	394	540
Total Science and Technology	701	739	912	965	991	1,013	1,261	1,439	2,036	2,563	2,658
Medical Sciences	631	578	653	669	621	728	735	1,081	1,061	1,263	1,156
Humanities	742	742	688	785	850	786	670	738	900	898	1,160
Law	632	603	615	670	603	687	744	751	860	1,289	1,170
Social Sciences	1,181	1,195	1,196	1,162	1,246	1,316	1,167	942	1,255	1,695	1,789
Other	-	-	-	-	-	-	-	-	-	-	-
Total	3,887	3,857	4,064	4,251	4,311	4,530	4,577	4,951	6,112	7,708	7,933

GREECE

Table VI.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
Technology	-	-	140	156	162	289	499	402	725	444	
Medical Sciences	567	679	531	445	416	619	622	448	612	511	
Humanities	127	113	100	98	90	85	66	44	48	63	
Education	149	143	89	121	125	136	178	192	138	194	170
Fine Arts	18	24	22	60	38	53	47	51	39	65	50
Social Sciences	251	266	270	324	402	330	408	434	407	245	
Other	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1,112	1,225	1,152	1,204	1,233	1,512	1,820	1,571	1,969	1,522	

GREECE

Table VII

TEACHERS AND PROFESSORS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		TOTAL	
	1962-63	1969-70	1962-63	1969-70	1962-63	1969-70
Primary	24,956	28,610	-	-	24,956	28,610
Secondary General(1)	9,353(2)	13,983(3)	..	..	9,353(2)	13,983(3)
Technical(4) and Vocational and non-university type higher education	1,791(5)	..	..	..	1,791(5)	3,510(5)
Teachers' Colleges	..	..	..	..	201	232
University	..	..	..	..	796	2,670

1) Number of professors in day schools (corresponding number of students: 284,464 in 1962-63 and 400,303 in 1969-70).

2) Including the hours worked by the part-time teaching staff in equivalent number of teachers (782). (The total number of hours is divided by 24, the number of teaching hours per week for a full-time teacher).

3) Including the hours worked by the part-time teaching staff in equivalent number of teachers (1,324).

4) Not including the teaching staff of special art schools (6,345 pupils in 1962-63) and of religious schools (1,050 pupils in 1962-63 and 1,155 pupils in 1969-70).

5) Equivalent of the hours worked by the teaching staff (full-time and part-time) in number of full-time teachers (25 hours per week per teacher for theoretic courses and 30 hours for practical courses). See The Teacher and Educational Change: A New Role, Vol. II: Recent Trends in Teacher Recruitment, OECD, Paris, 1974.

GREECE

Table VII.a

TEACHERS AND PROFESSORS IN PRIVATE SCHOOLS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		Total	
	1962-63	1969-70	1962-63	1969-70	1962-63	1969-70
Primary	2,364	2,503	-	-	2,364	2,503
Secondary General(1)	2,093(2)	2,302(2)	..	..	2,093(2)	2,302(2)
Technical and Vocational	..	..	..	..	..	..
Teachers' Colleges	-	-	-	-	-	-
Non-university type higher education	..	..	..	..	..	..
University	-	-	-	-	-	-

1) Number of professors in day schools (corresponding number of students: 43,068 in 1962-63 and 45,335 in 1969-70).

2) Including the hours worked by the part-time teaching staff in equivalent number of teachers (689 in 1962-63 and 800 in 1969-70).

GREECE

Table VII.b

TEACHING STAFF IN UNIVERSITIES BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1962-1963			1969-1970		
	Senior Level	Middle Level	Total	Senior Level	Middle Level	Total
Pure Science	56	5	61	74	420	494
Technology and Architecture	79	2	81	90	352	442
Agriculture	55	47	102	76	235	311
Total Science and Technology	190	54	244	240	1,007	1,247
Medical Sciences	70	219	289	95	648	743
Other	153	110	263	179	501	680
Total	413	383	796	514	2,156	2,670

Note: Senior Level: This group includes "ordinary" and "extraordinary" professors.

Middle Level: All teaching staff who are not Senior Level and who, in fact, teach a course (remunerated or not) are included here.

GREECE Table VII.c

FULL-TIME TEACHING STAFF IN SECONDARY GENERAL EDUCATION BY FIELD OF SPECIALISATION

Field of Specialisation	Number of teaching staff	
	1962-1963	1969-1970
Theology	1,183	1,719
Humanities	3,860	5,861
Mathematics	1,242	1,813
Physics and Chemistry	984	1,626
Foreign Languages	598	1,073
Physical Education	835	1,197
Other	651	694
Total	9,353(1)	13,983(1)

1) See Notes 1), 2) and 3) of Table VII.

GREECE

Table VIII

EDUCATIONAL EXPENDITURE(1) (1969-70)

At current prices.

Thousands of drachmas.

Type of Expenditure	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	Universities	Other expenditure for education(2)	General expenditure	Total expenditure
I. Central Government									
1. Current expenditure									
- remuneration of teaching staff	1,900,000	904,004	100,000	15,492	10,000	450,000	140,000		
- other									
2. Investment	148,967	242,267	65,919	6,458			36,459		
3. Transfers and grants			52,500						
4. Total Central Government expenditure for education									
II. Private Education									
1. Current expenditure									
- of which: remuneration of teaching staff									
2. Investment									

1) National classification.

2) For example, pre-primary education, etc.

GREECE

Table IX

DISTRIBUTION OF UNIVERSITY STUDENTS(1) BY FATHER'S PROFESSION

Father's occupation	Students	
	1959-1960	1969-1970
Professional, technical and related workers	3,705	7,594
Administrative, executive and managerial workers	666	1,614
Clerical workers	2,486	10,534
Sales	2,668	10,090
Farmers and related workers	6,540	20,518
Mining and manufacturing workers	2,738	11,255
Transport and communications workers	571	2,769
Service and recreation workers	667	2,253
Armed Forces	205	1,056
Without occupation (pensioners, rentiers, etc.)	6,327	7,294
Not declared	130	1,204
TOTAL	26,703	76,181

1) Students of the Teachers' Colleges, the School of Fine Arts and the School of Physical Education have also been included.

GREECE

Table X

DISTRIBUTION OF UNIVERSITY STUDENTS BY REGION OF PARENTS' RESIDENCE

Region of Parents' residence	Population Census 1961	Students 1961-1962	Population Census 1971	Students 1971-1972
Greater Athens	1,852,709	8,726 (1)	2,530,207	25,770
Central Greece and Euboea	970,949	2,404	984,790	5,653
Peloponnesus	1,096,390	3,661	983,800	8,060
Ionian Islands	212,573	446	183,633	1,094
Epirus	352,604	843	309,558	2,185
Thessaly	689,927	1,923	659,243	4,166
Macedonia	1,896,112	5,641	1,883,156	12,656
Thrace	356,555	407	329,297	974
Aegean Islands	477,476	850	416,475	1,974
Crete	483,258	1,494	456,208	3,848
Not classified				208
Total for Greece	8,388,553	26,395	8,736,367	66,588
Foreign students		1,532		5,774
General Total		27,927		72,362

1) Region of Attica.

GREECE

Table XI

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: NUMBER OF PERSONS WITH UNIVERSITY DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of study	1961				1970			
	Agriculture	Industry(1)	Other Sectors	Total	Agriculture	Industry(1)	Other Sectors	Total
Pure Science								
Architecture and Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities and Fine Arts								
Education								
Law								
Social Science								
Total								

1) Industry: Mining, manufacturing, construction and electricity.

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Table XI.a

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY:

NUMBER OF PERSONS WITH NON-UNIVERSITY TYPE HIGHER EDUCATION DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of study	1961				1970			
	Agriculture	Industry(1)	Other Sectors	Total	Agriculture	Industry(1)	Other Sectors	Total
Pure Science								
Architecture and Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities and Fine Arts								
Education								
Law								
Social Science								
Total								

1) Industry: Mining, manufacturing, construction and electricity.

Table XII

PRE-PRIMARY EDUCATION

	1959-60	1969-70
I. Enrolments		
a) Public schools	33,579	71,342
b) Private schools	5,266	11,542
II. Teachers		
a) Public schools	960	2,259
b) Private schools	228	369
III. Expenditure		
a) Central Government		
- Teachers		
- Subsidies to local authorities		
- Subsidies to private education		
- Other		
b) Private		
- Teachers		
- Other		
c) Local authorities		
- Teachers		
- Other		

SOURCES

- Replies of the Greek authorities.
- Greek Educational Statistical Yearbooks 1959-60 to 1969-70.
- Demographic Trends in Greece, 1950-1980.

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EDUCATIONAL CLASSIFICATION

The following educational levels (and fields of study) are presented by reference to the "conversion key" for Portugal (OECD classification):

1. Primary Education

The first six years of schooling covering the period of compulsory education (pre-primary education is separate from primary education as thus defined).

2. General secondary education

Education provided in the:

- Preparatory cycle (new structure).
- Secondary schools.
- Preparatory cycle of ecclesiastical schools.
- Philosophy courses in ecclesiastical higher institutions.

3. Technical and vocational education

Education provided in:

- Commercial and industrial schools ("Escolas comerciais e industriais").
- Agricultural schools ("Escolas agrícolas").
- Schools for nurses and midwives ("Escolas de enfermagen e partieras").
- Schools for social welfare workers ("Escolas de auxiliares sociais").
- Schools of music and dramatic art (secondary level) ("Ensino artístico música e teatro").
- The first two years of industrial institutes ("Institutos industriais").
- Commercial institutes ("Institutos comerciais").

4. Teachers colleges ("Ensino normal")

Teacher training (primary and infants). Training for secondary school teachers of handicapped children ("Magistério de anormais") and for teachers of physical education ("Escolas de educação física") is not included, being treated as non-university type higher education.

5. Non-university type higher education

See list of the educational institutions included under this title at the end of this note on p. 122.

6. University type higher education

See list of faculties and institutions included under this title at the end of this note on p. 122.

NOTES ON THE TABLES

Table I: Enrolments by educational level and year of age and enrolment ratios

Enrolments for children age "X" represents the number of children who had attained that age at the beginning of the school year.

Table III.a: University type higher education: number of candidates, new entrants and enrolments by field of study

(The following definitions which apply to Table III.a, university type higher education, may be adapted to other tables in which the defined terms are used.)

- Candidates: all persons seeking admission to university type higher education.
- New entrants: first-year students registered for the first time.
- Field of study: the OECD classification of higher education by field of study is given on p. 122.

Table VII.b: Teaching staff in universities by status and field of specialisation

- Senior level (S.L.): full and equivalent professors.

- Junior level (J.L.): assistant lecturer, auxiliairies and other equivalent university teaching staff.
- Middle level (M.L.): those who do not belong to either of the two above-mentioned categories: lecturers, senior lecturers, assistant professors.

Table IX: Distribution of university students by father's profession

The seven occupational groups shown in this table correspond to Major and Minor Groups of the International Standard Classification of Occupations (see p. 254).

Table XI: Education by sector of economic activity: number of persons with university diplomas by field of study

The grouping by sector of economic activity is based on the International Standard Industrial Classification of All Economic Activities (ISIC) (see p. 255).

CLASSIFICATION OF HIGHER EDUCATION
BY FIELD OF STUDY

1. University level	OECD Classification
Faculty of Sciences	
- Biologia (Biology)	Pure Sciences
- Física (Physics)	Pure Sciences
- Química (Chemistry)	Pure Sciences
- Geologia (Geology)	Pure Sciences
- Matemática (Mathematics)	Pure Sciences
- Engenharia geográfica (Geographical Engineering)	Technology
- Geografia (parte das disciplinas) (Geography - certain special subjects)	Social Sciences
Faculty of Law	
- Direito (Law)	Law
- Complementar de ciências jurídicas (Complementary courses in Jurisprudence)	Law
- Complementar de ciências político-económicas (Complementary courses in Economics and Political Sciences)	Social Sciences
Faculty of Humanities	
- Filologia clássica (Classical Philology)	Humanities
- Filologia germânica (German Philology)	Humanities
- Filologia românica (Roman Philology)	Humanities
- Filosofia (Philosophy)	Humanities
- História (History)	Humanities
- Bibliotecário-arquivista-documentalista (Librarian-Archivist - Documentalist)	Humanities
- Conservador de museus (Official custodian of museum)	Humanities
- Geografia (parte das disciplinas) (Geography - certain special subjects)	Social Sciences
- Ciências pedagógicas (Educational Sciences)	Education
Faculty of Medicine	
- Medicina (Medicine)	Medical Sciences
Faculty of Pharmacy	
- Farmácia (Pharmacy - 2 years after the professional course)	Medical Sciences
Faculty of Economics	
- Economia (Economics)	Social Sciences

Higher Institute for Economic and Finance Sciences

- Economia (Economics)	Social Sciences
- Finanças (Finance)	Social Sciences

Faculty of Technology

- Engenharia civil (Civil Engineer)	Technology
- Engenharia electrotécnica (Electro-technical Engineering)	Technology
- Engenharia mecânica (Mechanical Engineering)	Technology
- Engenharia de minas (Mining Engineering)	Technology
- Engenharia química (Chemical Engineering)	Technology
- Engenharia metalúrgica (Metallurgical Engineering)	Technology

Higher College of Veterinary Medicine

- Medicina veterinária (Veterinary Medicine)	Agriculture

Higher Agronomic Institute

- Agronomia (Agronomy)	Agriculture
- Silvicultura (Forestry)	Agriculture

Academies of Fine Arts

- Arquitectura (Architecture)	Architecture

The Evora Institute of Advanced Studies

- Secção de economia (Economics)	Social Sciences
- Secção de sociologia (Sociology)	Social Sciences

Military Academy

- Engenharia (Engineering)	Technology

The Institute of Social and Political Sciences for Overseas Territories

- Complementar de estudos ultramarinos (Complementary overseas studies)	Social Sciences
- Ciências antropólogicas e etnológicas (Anthropological and Ethnological Studies)	Social Sciences
- Complementar do serviço social (Complementary Social Service Courses)	Social Sciences

Technical Institute

- Engerharia civil (Civil Engineering)	Technology
- Engenharia electrotécnica (Electro-technical Engineering)	Technology
- Engenharia mecânica (Mechanical Engineering)	Technology
- Engenharia de minas (Mining Engineering)	Technology
- Engenharia química (Chemical Engineering)	Technology
- Engenharia metalúrgia (Metallurgical Engineering)	Technology

Faculty of Philosophy of Braga

- Ciências filosóficas (Philosophical Sciences)	Humanities
- Filosófico-humanístico (Philosophy and Humanities)	Humanities

Catholic University

- Teologia (Theology)	Humanities

2. Non-university level

Military Academy

- Administração militar (Military Administration	Others
- Aeronáutica (Aeronautics)	Others
- Artilharia (Artillery)	Others
- Cavalaria (Cavalry)	Others
- Infantaria (Infantry)	Others

Naval Schools

- Administração naval (Naval Administration)	Others
- Engenheiro maquinista naval (Mechanical Naval Engineer)	Others
- Marinha (Marine)	Others

Academy of Fine Arts

- Pintura (Painting)	Fine Arts
- Escultura (Sculpture)	Fine Arts

Institute for Languages and Administration

- Organização e administração de empresas (Organisation and Management of Enterprises)	Social Sciences
- Jornalismo (Journalism)	Social Sciences
- Publicidade e relações públicas (Publicity and Public Relations)	Social Sciences

Social Studies Institute

- Administração social de empresas (Social Administration of Enterprises)	Social Sciences
- Política social (Social Policy)	Social Sciences

The Institute of Social and Political Sciences for Overseas Territories

- Administração ultramarina (Overseas Administration)	Social Sciences
- Serviço social (Social Service)	Social Sciences

New Occupations Institute

- Organização e gestão de empresas (Organisation and Management of Enterprises)	Social Sciences
- Relações públicas e publicidade (Public Relations and Publicity)	Social Sciences

Schools and Institutes for Nurses

- Enfermagen (Nurses)	Medical Sciences
- Fisioterapia (Physiotherapy)	Medical Sciences
- Terapêutica ocupacional (Occupational Therapy)	Medical Sciences
- Terapêutica da Fala (Orthoepy)	Medical Sciences

National Institute for Physical Education

- Professores de educação física (Physical Education Professors)	Education

Catholic Higher Education Institute

- Professores de moral e religião (Moral and Religion Professors)	Education

Teacher Training for Mentally Handicapped Children	Education

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Table I

ENROLMENTS BY EDUCATIONAL LEVEL AND YEAR OF AGE AND ENROLMENT RATIOS (1969-70)

Age	Primary	Secondary General(1)	Technical and vocational(2)	Teachers' Colleges(3)	Non-university type higher education	University	Total Enrolments	Population in age group (4)	Enrolment ratios
5									
6	39,125	-	-	-	-		39,125	187,200	0.2090
7	184,710	-	-	-	-		184,710	186,700	0.9893
8	183,713	-	-	-	-		183,713	186,200	0.9866
9	175,202	-	-	-	-		175,202	185,700	0.9434
10	154,377	18,675	260	-	-		173,312	164,800	1.0516
11	115,200	40,080	480	-	-		155,760	164,200	0.9485
12	87,958	46,678	4,782				139,418	164,200	0.8490
13	49,391	36,506	11,249	-	-		97,146	163,800	0.5930
14	-	28,239	17,100	-	-		45,339	163,500	0.2773
15	-	20,910	18,892	-	-		39,702	155,300	0.2556
16	-	17,204	17,934	151	4		35,293	154,900	0.2278
17	-	13,795	15,631	420	1,819		31,665	154,300	0.2052
18	-	11,879	12,754	647	3,212		28,492	154,200	0.1847
19	-	8,420	9,457	746	4,445		23,068	153,700	0.1500
20	-	5,208	6,350	618	5,386		17,562	143,700	0.1222
21	-	3,405	3,744	400	5,297		12,846	143,700	0.0893
22	-	2,306	2,526	227	4,782		9,841	143,700	0.0684
23	-	1,801	1,996	137	3,970		7,904	143,600	0.0550
24	-	1,570	1,942	91	3,056		6,659	143,600	0.0465
25	-	1,419	1,842	49	2,318		5,628	126,700	0.0444
26	-	1,201	1,693	49	1,802		4,745	126,700	0.0374
27	-	973	1,300	29	1,396		3,698	126,600	0.0292
28	-	834	1,085	22	1,244		3,185	126,600	0.0251
29	-	705	865	15	1,122		2,707	126,600	0.0213
30 and over	-	3,654	4,197	86	6,687		14,624	4,411,200	
Total	989,576	265,467	135,979	3,687	46,540		1,441,344	8,289,100	0.1738

1) Not including 804 students of Philosophy in higher Ecclesiastical Schools.

2) All students of Industrial Institutes are included here (even those in the last two years: higher non-university level). No information on the age distribution by year of study is available for these students.

3) "Magistério Primário" and "Infantil".

4) Figures obtained from Estimativas da População de 1961 a 1968 Metrópola; Lisboa. Gabinete de Estudos e Planeamento da Acção Educativa, Vol. XXV 1969, Série Estudos, No. 1.

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Table II

ENROLMENTS

Year	Primary	Secondary General	Technical and Vocational	Teachers' Colleges	Non-University type higher education(1)	University	Total Enrolments
1959-60	868,625	107,889(2)	92,277	3,783	4,880	18,153	1,095,607
1960-61	887,235	119,586	104,716	4,383	5,023	19,771	1,140,714
1961-62	886,820	125,136(2)	117,667	4,683	5,455	20,774	1,160,535
1962-63	886,519	137,265	130,574	4,447	5,788	22,150	1,186,743
1963-64	883,039	146,070(2)	140,290	3,625	7,202	22,926	1,203,152
1964-65	894,195	152,864	151,730	3,147	7,606	25,593	1,235,135
1965-66	892,603	158,049	162,517	3,096	8,399	27,782	1,252,446
1966-67	891,082	163,615	164,114	2,692	8,827	29,657	1,259,987
1967-68	904,120	167,825	165,368	2,518	9,646	32,396	1,291,473
1968-69	961,546	224,904	146,692	2,647	10,546	36,894	1,383,229
1969-70	989,676	266,266	131,062	3,687	11,578	39,292	1,441,561
1970-71	992,446	297,678	137,997	4,972	15,526	39,496	1,488,115

1) Included here are all enrolments in the Industrial Institutes. According to the OECD classification, the first two classes of these Institutes are at secondary technical and vocational level, but separate data for these two classes are not available.

2) With the exception of students of Philosophy in higher Ecclesiastical Schools.

PORTUGAL Table II.a

NUMBER OF STUDENTS IN PRIVATE SCHOOLS

Level of Education	1954-55	1959-60	1964-65	1969-70
Primary	37,805	40,365	44,090	51,918
Secondary General	33,021	65,840	93,084	121,630
Technical and vocational	3,027	7,400	10,595	9,856
Teachers' Colleges	230	570	792	711
Non-university type higher education	1,050	2,078	1,360	2,164
University	20		82	452
TOTAL	75,153	116,253	150,003	185,731

PORTUGAL Table II.b

NUMBER OF FEMALE STUDENTS IN PUBLIC AND PRIVATE SCHOOLS

Level of Education	1959-60	1964-65	1969-70
Primary	412,708	43[illegible],810	481,310
Secondary General	50,227	72,646	127,369
Technical and Vocational	26,997	51,925	48,033
Teachers' Colleges	2,500(1)	2,883	3,473
Non-university type higher education	1,193	2,314	4,496
University	5,421	9,434	17,701
Total	499,046	574,012	682,382

1) Estimate

PORTUGAL

Table II.c

ENROLMENTS IN THE FIRST AND THE LAST YEAR OF STUDIES

Level of Education	1960-61		1969-70	
	First year	Last year	First year	Last year
Primary	270,852	183,027	286,007	16,060
Secondary General	22,770	11,125	75,759	21,151
Technical and Vocational				
Teachers' Colleges				
Non-university type higher education				
University	...	...	...	...

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Table II.d

ENROLMENTS IN SECONDARY GENERAL EDUCATION

Year	"LICEAL"				"ECLESIASTICO" (preparatório)
	"ciclo preparatório"	"1° ciclo"	"2° ciclo"	"3° ciclo"	
1959-60	-	42,235	45,223	14,511	5,920
1960-61	-	45,884	50,060	15,877	6,645
1961-62	-	46,921	54,664	16,665	6,886
1962-63	-	50,841	59,731	18,867	6,835
1963-64	-	53,677	64,409	21,057	6,927
1964-65	-	54,931	65,655	24,071	7,095
1965-66	-	56,900	67,722	25,111	7,187
1966-67	-	59,659	68,904	26,882	7,116
1967-68	-	61,071	71,980	26,837	7,037
1968-69	73,285(1)	38,755	77,097	28,118	6,803
1969-70	138,564	-	89,368	31,005	6,525
1970-71					

1) Changes in the educational structure.

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Table III

NEW ENTRANTS

Year	Primary	Secondary General	Technical and Vocational	Teachers' Colleges	Non-university type higher education	University
1959-60						
1960-61	185,847	20,928	...	...	...	
1961-62	180,494	20,811	...	...	5,133	
1962-63	179,028	22,398	22,245	1,871	...	
1963-64	176,038	22,869	...	...	5,999	
1964-65	191,747	22,852	27,699	1,382	...	
1965-66	184,541	24,395	...	...	7,913	
1966-67	181,098	25,256	25,131	1,026	...	
1967-68	188,856	24,600	...	...	...	
1968-69	202,174 (1)	84,970 (2)	21,400	1,180	...	
1969-70	185,497	91,644	36,535	2,094	11,370 (3)	
1970-71						

1) New entrants in the 5th year of study

for	
67/68	...
68/69	23,750
69/70	35,576

2) Of which new entrants in preparatory cycle and in 2nd cycle.

3) With the exception of new entrants in non-university level higher education.

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Table III.a

UNIVERSITY TYPE HIGHER EDUCATION:
NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Pure Science					2,539	3,027
Architecture					445	686
Technology					3,696	7,719
Agriculture					510	828
Total Science and Technology					7,190	12,260
Medical Sciences					3,213	5,691
Humanities					2,500	7,353
Education					1,032	4,827
Fine Arts					-	-
Law					2,761	4,351
Social Science					1,457	4,810
Other					-	-
Total					18,153	39,292

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Table III.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Pure Science					-	-
Architecture					-	-
Technology					1,450	4,917
Agriculture					-	-
Total Science and Technology					1,450	4,917
Medical Sciences					463	1 301
Humanities					760	470
Education					128	521
Fine Arts					609	815
Law					-	-
Social Science					554	2,909
Other					916	645
Total					4,880	11,578

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Table IV

HIGHER EDUCATION: NUMBER OF FEMALE STUDENTS BY FIELD OF STUDY

Field of Study	University		Non-university type higher education	
	1959-60	1969-70	1959-60	1969-70
Pure Science	1,377	2,268	-	-
Architecture	66	184	-	-
Technology	207	983	117	730
Agriculture	78	221	-	-
Total Science and Technology	1,728	3,656	117	730
Medical Sciences	732	2,184	368	1 104
Humanities	1,796	5,874	-	-
Education	627	3,519	45	725
Fine Arts	-	-	375	604
Law	-	-	-	-
Social Science	265	1,598	288	1,333
Other	-	-	-	-
Total	5,421	17,701	1,193	4,496

Table V

HIGHER EDUCATION: FOREIGN STUDENTS IN THE COUNTRY AND NATIONALS STUDYING ABROAD BY FIELD OF STUDY

Field of Study	Foreign students		Nationals studying abroad	
	1960	1970	1960	1970
Pure Sciences	10	71	..	..
Technology	9	60	..	..
Medical Sciences	22	487	..	..
Other	58	284	..	..
Total	99	902	..	..

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Table VI

GRADUATES

Year	Primary	Secondary General(3)	Technical and Vocational	Teachers' Colleges	Non-university type higher education	University (1st degree of studies)
1959-60	122,308	...	14,397	1,523	731	1,530
1960-61	132,920	4,444	17,124	2,043	718	1,384
1961-62	134,586	...	18,856	2,106	794	1,287
1962-63	137,801	(1) ...	20,724	2,208	772	1,403
1963-64	138,646	...	21,365	1,900	...	1,315
1964-65	141,452	7,159	23,546	1,424	941	1,434
1965-66	140,139	...	24,649	1,462	...	1,393
1966-67	138,586	6,600	25,629	1,361	1,105	1,618
1967-68	138,447	...	26,307	1,106	...	1,698
1968-69	152,546	(2) 8,532	30,738	1,164	1,179	1,681
1969-70	154,314	9,055	10,621	1,284	1,102	2,142
1970-71						

1) End of the 4th class.

2) End of the 4th and 6th classical.

3) End of the 7th year of Lycée and preparatory of the Ecclesiastical Schools.

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Table VI.a

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science	193	192	175	254	248	340	297	429	298	...	251	
Architecture	57	83	46	55	56	52	23	21	...	...	32	
Technology	254	222	198	174	147	139	179	234	248	...	256	
Agriculture	76	46	42	47	43	44	41	43	44	...	126	
Total Science and Technology	580	543	461	530	494	575	540	727	...	...	654	
Medical Sciences	380	343	304	335	291	303	277	280	346	...	281	
Humanities	165	165	122	128	127	119	121	111	158	...	109	
Education	106	112	132	119	107	107	104	118	...	...	608	
Fine Arts	-	-	-	-	-	-	-	-	-	-	-	
Law	210	144	179	196	190	198	186	243	328	...	281	
Social Science	89	77	89	95	106	132	165	139	150	...	209	
Other	-	-	-	-	-	-	-	-	-	-	-	
Total	1,530	1,384	1,287	1.403	1,315	1,434	1,393	1,618	1,688	1,681	2,142	

Table VI.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science	-	-	-	-	-	-	-	-	-	-	-	
Architecture	-	-	-	-	-	-	-	-	-	-	-	
Technology	66	65	56	71	54	74	79	92	102	182	123	
Agriculture	-	-	-	-	-	-	-	-	-	-	-	
Total Science and Technology	66	65	56	71	54	74	79	92	102	182	123	
Medical Sciences	81	63	83	93	85	70	56	96	176	139	120	
Humanities	158	176	178	173	150	166	130	146	...	122	106	
Education	16	20	22	26	...	22	...	36	61	95	120	
Fine Arts	40	59	93	113	116	121	137	81	131	109	116	
Law	-	-	-	-	-	-	-	-	-	-	-	
Social Science	98	81	53	66	50	81	138	255	142	91	267(1)	
Other	272	254	309	230	320	407	345	399	367	441	240(2)	
Total	731	718	794	772	...	941	...	1,105	...	1,179	1,102 (1)(2)	

1) Not including graduates of the Higher Institute of Applied Psychology.
2) Not including graduates of the Teacher Training School.

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Table VII

TEACHERS AND PROFESSORS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		TOTAL (1)	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Primary					25,690	39,753
Secondary General					6,002	17,053
Technical and Vocational					4,955	8,102
Teachers' Colleges					239	291
Non-university type higher education					1,589	2,706
University						
Total					38,475	57,905

1) Professors and "Regentes".

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Table VII.a

TEACHERS AND PROFESSORS IN PRIVATE SCHOOLS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		TOTAL	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Primary					1,663	2,089
Secondary General					4,056	8,999
Technical and Vocational					599	707
Teachers' College					44(1)	125
Non-university type higher education					469	491
University						
Total					6,831	12,411

1) Only "Magisterio primario".

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Table VII.b

TEACHING STAFF IN UNIVERSITIES BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1959-1960				1969-1970			
	Senior Level	Middle Level	Junior Level	Total	Senior Level	Middle Level	Junior Level	Total
Pure Science								
Architecture								
Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities								
Education								
Fine Arts								
Laws								
Social Science								
Other								
Total								

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TEACHING STAFF IN SECONDARY GENERAL EDUCATION BY FIELD OF SPECIALISATION(1)

Field of Specialisation	Full-time staff		Part-time staff	
	1959-60	1969-70	1959-60	1969-70
Languages		2,301		
History, Philosophy and Legislation		709		
Geography and Natural Sciences		676		
Physics, Chemistry and Mathematics		1,543		
Drawing and Handicraft		1,413		
Religion and Ethics		1,198		
Physical Education		1,416		
Choral Singing		783		
Needlework		161		
Other		21		
Total		10,221		

1) Public education only.

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Table VII.d

TEACHING STAFF IN VOCATIONAL SCHOOLS BY FIELDS OF SPECIALISATION

Field of Specialisation	Full-time staff		Part-time staff		TOTAL	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Commerce and Industry(1)					4,279	6,998
Agriculture					91	255
Social Services					47	53
Nurses and Midwives					338	642
Fine Arts					200	154
Total					4,955	8,102

1) Teachers of Commercial Institutes (number unknown) are not included. The teaching staff of the Industrial Institutes is included in non-university higher education.

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Table VIII

EDUCATIONAL EXPENDITURE (1970)

AT CURRENT PRICES

millions of Escudos

Type of Expenditure	Primary	Secondary General(1)	Technical and Vocational(2)	Teachers' Colleges	Non-university type higher education	University	Other expenditure for education	Total expenditure
I. Central Government								
1. Current expenditure	1,391.8	763.7	688.6	12.7	341.3		300.9	3,499.0
- remuneration of teaching staff	1,304.8	629.0	579.6	8.6	182.0			
- other	87.0	134.7	109.0	4.1	159.3			
2. Investment(3)								287.9
3. Subsidies and transfers								
4. Total Central Government expenditure for education								3,786.9
II. Private Education								
1. Current expenditure								584.8 (4)
- of which: remuneration of teaching staff								514.0 (4)
2. Investment								9.0 (4)
III. Local Authorities								
1. Current expenditure								
- of which: remuneration of teaching staff								
2. Investment								176.0 (4)

1) "Ciclo preparatorio" and "ensino liceal".

2) Including expenditure for the last two years of the Industrial Institutes.

3) Other expenditures related to education (such as building) are not included since they appear in the budgets of other ministries.

4) Year 1969.

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Table IX

DISTRIBUTION OF UNIVERSITY STUDENTS
BY FATHER'S PROFESSION

Father's Profession(1)	Students	
	1959-60	1969-70
I. Professional, Technical and Related Workers		
II. Administrative, Executive and Managerial Workers		
- Government		
- Other		
III. Clerical and Sales Workers		
- Working Proprietors		
- Other		
IV. Agricultural and Related Workers		
- Farmers, Farm Managers		
- Other		
V. Manual Workers		
- Skilled		
- Semi-skilled		
- Unskilled		
VI. Service Workers		
VII. Others and not specified		
Total		

1) The seven occupational groups listed here correspond to major and minor groups of the International Standard Classification of Occupations.

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Table X

DISTRIBUTION OF UNIVERSITY STUDENTS BY TOWN OF PARENTS' RESIDENCE

Towns of more than 50,000 inhabitants	Population Census 1960	Students 1960-61	Population Census 1970	Students 1970-71
Rest of the country				
Total				

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Table XI

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: NUMBER OF PERSONS WITH UNIVERSITY DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of Study	1960 (1)				1970			
	Agri-culture	Industry (2)	Other Sectors	Total	Agri-culture	Industry	Other sectors	Total
Pure Science				2,237				
Architecture				655				
Technology				5,489				
Agriculture				1,345				
Total Science and Technology				9,726				
Medical Sciences				9,134				
Humanities - Fine Arts				3,769				
Education				181				
Law				3,689				
Social Science				3,598				
Other				5,496				
Total				35,593(3)				

1) *Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries*, OECD, Paris, 1969, pp. 83 and 87.

2) Includes mining, electricity and manufacturing.

3) Not including the Armed Forces.

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Table XI.a

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY:
NUMBER OF PERSONS WITH NON-UNIVERSITY TYPE HIGHER EDUCATION DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of Study	1960 (1)				1970			
	Agriculture	Industry (2)	Other Sectors	Total	Agriculture	Industry	Other Sectors	Total
Pure Science								
Architecture								
Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities - Fine Arts								
Education								
Social Science								
Law								
Other								
Total				20,355 (3)				

1) Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries, OECD, Paris, 1969, p. 83.

2) Includes mining, electricity and manufacturing.

3) Not including the Armed Forces.

Table XII

PRE-PRIMARY EDUCATION

	1959-60	1964-65	1969-70
I. Enrolments			
a) Public schools	0	0	0
b) Private schools	6,126	10,350	15,153
II. Teachers			
a) Public schools	0	0	0
b) Private schools	181	363	651
III. Expenditure			
a) Central Government			
- Teachers			
- Subsidies to local authorities			
- Subsidies to private education			
- Other			
b) Private			
- Teachers			
- Other			
c) Local authorities			
- Teachers			
- Other			

SOURCES

Replies of the Portuguese authorities.

Estatística da Educação published biennially since 1955 by the Portuguese National Institute of Statistics. The information for 1959-60, 1961-62, 1963-64, 1965-66, 1967-68 is found in the Statistical Yearbook of Portugal.

Development of Higher Education 1950-1967 - Statistical Survey, OECD, Paris, 1970.

Study on Teachers/Etudes sur les Enseignants - Netherlands, Portugal, OECD, 1968.

Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries. OECD, 1969

SPAIN

EDUCATIONAL CLASSIFICATION

The following educational levels (and fields of study) are presented by reference to the "conversion key" for Spain (OECD classification)(1):

1. Primary education(2)

The first eight years of schooling (not including pre-primary education).

2. General secondary education

(Leading to the "bachillerato general"). The three cycles at this level are as follows:

- Elementary cycle ("ciclo elemental").
- Upper cycle ("ciclo superior").
- Pre-university cycle ("ciclo pre-universitario")

3. Secondary technical and vocational education

Lower level

- The cycle preparing for "grado pericial de comercio" (Commercial technician in commercial schools).
- The "Escuelas de artes y offcios artísticos", "Escuelas de bellas artes", "Conservatorio de música" (secondary arts schools).

---

1) With the exception of primary education for which the classification used in Spanish statistics has been retained.

2) According to the 1970 Reform, an eight-year basic general education school will replace the primary school and the elementary cycle of the secondary general education. Those of the primary schools which still operate according to the system prior to the Reform include two cycles, each of them of 4 years' duration: the elementary cycle ("periodo elemental") and the advanced cycle ("periodo de perfecciona-miento").

- The "Formación profesional industrial" (Industrial vocational training schools).
- The "Escuelas de náutica", "de pesca", "de capataces agrícolas" (Nautical schools, fishing schools, schools for intermediate training in agriculture).

Upper level

- "Preparatorio de técnicas de grado médio" (Preparatory classes for post-secondary technical schools).
- "Centros de enseñanza laboral" (Centres preparing for the "bachillerato técnico" (Technical baccalauréat).

4. Teachers colleges ("Magistério")

Teacher training.

5. Non-university type higher education

See list of the educational institutions included under this title at the end of this note on p.157.

6. University type higher education

See list of institutions included under this title at the end of this note on p.157.

NOTES ON THE TABLES

Table I: Enrolments by educational level and year of age and enrolment ratios

Enrolments for children age "X" represents the number of children who had attained that age at the beginning of the school year.

Table III.a: University type higher education: number of candidates, new entrants and enrolments by field of study

(The following definitions which apply to Table III.a, university type higher education, may be adapted to other tables in which the defined terms are used.)

- Candidates: all persons seeking admission to university type higher education.
- New entrants: first-year students registered for the first time.

- Field of study: the OECD classification of higher education by field of study is given on p.157

Table VII.b: Teaching staff in universities by status and field of specialisation

- Senior level (S.L.): full and equivalent professors.
- Junior level (J.L.): assistant lecturer, auxiliaries and other equivalent university teaching staff.
- Middle level (M.L.): those who do not belong to either of the two above-mentioned categories: lecturers, senior lecturers, assistant professors.

Table IX: Distribution of university students by father's profession

The seven occupational groups shown in this table correspond to Major and Minor Groups of the International Standard Classification of Occupations (see p. 254).

Table XI: Education by sector of economic activity: number of persons with university diplomas by field of study

The grouping by sector of economic activity is based on the International Standard Industrial Classification of all Economic Activities (ISIC) (see p. 255).

CLASSIFICATION OF HIGHER EDUCATION

BY FIELD OF STUDY

1. University level	OECD Classification
Escuelas técnicas superiores (Higher technical schools)	
- Aeronáuticos (Aeronautics)	Technology
- Agronomos (Agronomy)	Agriculture
- Caminos, canales y puertos (Roads and waterways construction)	Technology
- De minas (Mining)	Technology
- De montes (Waterways and Forestry)	Technology
- De telecomunicación (Telecommunications)	Technology
- Industriales (Industry)	Technology
- Navales (Marine Engineering)	Technology
- Arquitectura (Architecture)	Architecture
Universidades (Universities)	
- Ciencias (Faculty of Science)	Pure Sciences
curso selectivo (selection course)	"
Biológicas (Biology)	"
Físicas (Physics)	"
Geológicas (Geology)	"
Matemáticas (Mathematics)	"
Químicas (Chemistry)	"
- Ciencias políticas, económicas y comerciales (Faculty of Political, Economic and Commercial Science)	Social Sciences "
Económicas y comerciales (Economic and Commercial Science)	" "
Políticas (Politics)	
- Derecho (Law Faculty)	Law
- Farmacia (Faculty of Pharmacy)	Medical Sciences
- Filosofia y letras (Faculty of Arts and Philosophy)	Humanities
estudios comunes (common course)	"
Antropologia americana (American Anthropology)	"
Arte (History of Art)	"
Bíblica trilingue (Study of the three Biblical languages)	"
Filología clasica (Classical Philology)	"
Filología moderna (Modern Philology)	"
Filología romanica (Romance Philology)	"
Filología semitica (Semitic Philology)	"
Filosofía (Philosophy)	"

Historia (History) Historia de América (American History)	Humanities
Pedagogía (Pedagogy)	Education
- Medicina (Faculty of Medicine)	Medical Sciences
- Veterinaria (Faculty of Veterinary Medicine)	Agriculture

2. Non-university level

Escuelas técnicas de grado médio (Post-secondary technical schools with the exception of preparatory classes)	Technology
Escuelas profesionales de comercio "grado profesional" (Commercial schools "professional grade")	Social Sciences
Escuelas de ayudantes técnico sanitarios (Training schools for medical assistants)	Medical Sciences
Escuelas de puericultura y sanidad (Health and child welfare schools)	Medical Sciences
Escuelas de bellas-artes, conservatorios de música y declamación, escuelas superiores de arte dramático (Academies of Fine Arts, Schools of Music and Dramatic Art)	Fine Arts

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Table I

ENROLMENTS BY EDUCATIONAL LEVEL AND YEAR OF AGE AND ENROLMENT RATIOS (1969-70)

Age	Primary	Secondary General	Technical and Vocational		Teachers' Colleges	Non-university type higher education	Universities	Total enrolments	Population (1)	Enrolment ratios
			(lower level)	(upper level)						
5										
6	607,260							607,260	595,081	1.0204
7	587,789							587,789	588,966	0.9980
8	593,439							593,439	583,048	1.0178
9	596,469							596,469	582,393	1.0242
10	472,256	130,736	9,362					612,354	593,998	1.0309
11	357,698	224,677	3,271					585,646	599,500	0.9769
12	291,203	242,972	12,787	17				546,979	601,202	0.9098
13	225,079	225,629	19,068	1,506				471,282	594,646	0.7926
14	57,952	184,674	30,863	4,114				277,603	558,441	0.4971
15		137,537	30,693	5,493				173,723	548,163	0.3169
16		103,445	29,308	5,515	1,663	1,021		140,952	527,717	0.2671
17		60,021	23,605	4,682	4,594	4,815	12,352	110,069	536,248	0.2052
18		28,202	20,685	3,071	7,396	9,210	22,086	90,650	536,961	0.1689
19		14,099	12,837	1,631	7,782	11,402	24,396	72,147	508,142	0.1419
20		19,086	18,708	924	6,496	12,548	25,313	83,075	502,012	0.1655
21			10,441	295	4,470	11,074	22,891	49,171	530,370	0.0927
22			916	167	3,080	9,069	19,155	32,387	564,232	0.0574
23			655	123	2,119	6,451	16,104	25,452	510,597	0.0499
24			1,649	69	3,583	5,870	12,208	23,379	498,991	0.0468
25			180	62		4,196	9,412	13,850	529,115	0.0262
26			959	136		6,971	6,905	14,971	504,149	0.0297
27							4.743	4,743	502,341	0.0094
28							3,361	3,361	430,351	0.0079
29							2,776	2,776	397,922	0.0070
30 and over							10,437	10,437(2)	505,662	
Total	3,789,145	1,371,078	225,987(2)	27,805	41.183	82,627	192,139	5,729,964	13430,248	

1) Estimated for 1970. (Datos y cifras de la Enseñanza en España, 1970 tomo 1)

2) Excluding 13,270 students of Applied Arts for whom the age distribution was not available.

Source: Estadistica de la Enseñanza en España 1969-70.

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Table II

ENROLMENTS

Year	Primary	Secondary general	Technical and vocational		Teachers' colleges	Non-university type higher education	Univer-sities	Total enrolments
			(lower level)	(upper level)				
1959-60	...	448,311	...	...	41,573	39,781	81,226	...
1960-61	...	474,057	118,785	44,450	43,126	44,812	77,123	...
1961-62	...	564,111	124,967	53,609	43,103	45,424	82,331	...
1962-63	...	622,872	135,720	56,878	45,898	46,965	88,352	...
1963-64	2,973,316	682,226	144,436	65,615	50,363	50,833	102,855	4,069,644
1964-65	3,184,913	745,044	161,497	76,400	58,310	53,338	112,647	4,392,149
1965-66	3,331,566	834,290	177,299	56,936	63,116	77,910(1)	125,879	4,666,996
1966-67	3,380,218	929,589	190,657	60,375	68,972	80,607	141,408	4,851,826
1967-68	3,503,637	1,124,936	209,618	44,715	61,927	82,715	154,285	5,181,833
1968-69	3,664,823	1,207,006	226,058	36,883	54,541	81,546	176,428	5,447,285
1969-70	3,789,135	1,371,078	239,257	27,805	41,183	82,627	192,139	5,743,224
1970-71	3,929,529	1,521,857	252,561	20,908	47,541	86,746	213,159	6,072,301

1) Technical Education Reform: for the post-secondary technical schools, the statistics cover all students following courses in the various specialisations (matriculados en los cursos de la carrera), omitting enrolments in preparatory courses for these schools (selectivo de "iniciación" and "ingreso") not considered in the present survey as higher education. However, because of the important selective function of these courses their elimination, by the Technical Education Reform of 1964, allowed a significant increase of new entrants in these schools. Consequently, since 1965-66 information on post-secondary technical schools cannot be compared with that of previous years.

Source: Estadistica de la Enseñanza en España.

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Table II.a

NUMBER OF STUDENTS IN PRIVATE SCHOOLS(1)

Level of education	1961-62	1964-65	1967-68	1969-70	1970-71
Primary	...	774,821	941,259	1,051,601	1,097,649
Secondary General(2)	470,793	593,463	826,636	929,779	979,863
Technical and vocational (lower level)	...	76,107	91,531	100,647	...
Technical and vocational (upper level)	...	20,922	15,634	10,337	7,710
Teachers' Colleges	5,668	10,078	10,266	3,750	3,379
Non-university type higher education	...	2,555	4,714	...	...
University	610	3,794	7,161	7,878	7,557

1) Including church schools

2) Including "Colegiada privada y libre y de Iglesia".

3) Universities and technical high schools ("Centros no estatales").

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Table II.b

NUMBER OF FEMALE STUDENTS IN PUBLIC AND PRIVATE SCHOOLS(1)

Level of education	1959-60	1964-65	1967-68	1969-70
Primary	...	1,600,042	1,765,533	1,895,040
Secondary General	173,987	301,242	488,151	619,792
Technical and Vocational (lower level)	29,811	25,528(2)	35,031(2)	49,129
Technical and Vocational (upper level)	1,570	18,711	16,674	11,223
Teachers' Colleges	25,854	36,231	36,589	22,666
Non-university type higher education	10,464	11,451	13,233	14,806
University	13,464	22,229	35,487(3)	48,432

1) "Nacionales, Iglesia y Privada".

2) With the exception of students of "asignaturas sueltas" in Applied Arts.

3) Of which 814 in "Escuelas de Técnica Superior".

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Table II.c

ENROLMENTS IN THE FIRST AND THE LAST YEAR OF STUDIES

Level of education	1960-61		1969-70	
	First year	Last Year	First Year	Last Year
Primary	...	...	1,001,304	66,960
Secondary General	112,675	19,221	355,767	99,625
Technical and vocational				
Teachers' Colleges	16,455	12,821	15,828	12,854
Non-university Type Higher Education	10,744	6,287	41,929	15,841
University	22,154	13,728	69,869	23,876

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Table II.d

ENROLMENTS IN SECONDARY GENERAL EDUCATION

	"Grado elemental"	"Grado superior"	"Pre-universitário"	Total enrolments
1959-60	376,712	54,557	17,042	448,311
1960-61	394,629	60,207	19,221	474,057
1961-62	469,737	74,008	20,366	564,111
1962-63	518,270	81,602	23,000	622,872
1963-64	566,736	89,396	26,094	682,226
1964-65	622,616	95,388	27,040	745,044
1965-66	697,292	108,891	28,107	834,290
1966-67	775,929	123,576	30,084	929,589
1967-68	934,742	155,267	34,927	1,124,936
1968-69	998,084	172,060	36,862	1,207,006
1969-70	1,121,006	205,413	44,659	1,371,078
1970-71	1,228,268	241,680	51,909	1,521,857

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Table III

NEW ENTRANTS

Year	Primary	Secondary General	Technical and vocational		Teachers' Colleges	Non-university type higher education	University
			(lower level)	(upper level)			
1959-60							
1960-61							
1961-62							
1962-63							
1963-64							
1964-65							
1965-66							
1966-67							
1967-68							
1968-69							
1969-70							
1970-71							

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Table III.a

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Pure Science					12,552	31,724
Architecture						8,548
Technology					18,313	30,287
Agriculture						4,639
Total Science and Technology					30,865	75,198
Medical Sciences					22,501	36,827
Humanities					7,345	39,404
Education					-	-
Fine Arts					-	-
Law					14,773	20,363
Social Sciences					5,742	20,347
Other					-	-
Total					81,226	192,139

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Table III.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Pure Science					-	-
Architecture					-	-
Technology					18,597	60,962
Agriculture					-	-
Total Science and Technology					18,597	60,962
Medical Sciences					3,421	12,500
Humanities					-	-
Education					-	-
Fine Arts					10,715	2,376
Law					-	-
Social Sciences					7,048	6,789
Other					-	-
Total					39,781	82,627

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Table IV

HIGHER EDUCATION: NUMBER OF FEMALE STUDENTS BY FIELD OF STUDY

Field of Study	University		Non-university type higher education	
	1959-60	1969-70	1959-60	1969-70
Pure Science	2,607	9,150	-	-
Architecture	14	596	-	-
Technology	-	340	116	1,890
Agriculture	11	313	-	-
Total Science and Technology	2,632	10,399	116	1,890
Medical Sciences	4,809	9,817	2,685	10,631
Humanities	4,585	21,134	-	-
Education	-	-	-	-
Fine Arts	-	-	7,073	1,342
Law	855	3,596	-	-
Social Sciences	582	3,486	590	943
Other	-	-	-	-
Total	13,463	48,432	10,464	14,806

SPAIN Table V

HIGHER EDUCATION: FOREIGN STUDENTS IN THE COUNTRY AND NATIONALS STUDYING ABROAD BY FIELD OF STUDY

Field of Study	Foreign students		Nationals studying abroad	
	1959	1968	1959	1968
Pure Sciences	107	414	..	..
Technology	51	517	..	..
Medical Sciences	2,268	5,039	..	..
Other	728	970	..	..
Total	3,154	6,940	..	..

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Table VI

GRADUATES

Year	Primary		Secondary General			Technical and vocational		Teachers' Colleges (2)	Non-university type higher education (1st degree of studies)	University (1st degree of studies)
	CEP	"Cert. Escolaridad"	Elementary	Upper	"Madurez"	(lower level)	(upper level) (1)			
1959-60	...	...	53,751	22,526	11,793	...	...	...	...	5,856
1960-61	...	...	59,371	23,570	13,505	...	2,167	...	...	5,288
1961-62	...	...	67,071	26,918	14,349	...	1,955	...	6,671	5,873
1962-63	...	...	62,058	29,217	18,410	...	1,772	...	6,396	5,846
1963-64	170,333	23,614	71,108	28,213	15,708	15,185	4,315	7,445	8,397	6,611
1964-65	188,435	24,446	76,850	31,521	20,337	17,719	5,110	8,978	9,832	7,434
1965-66	197,818	19,877	78,956	30,737	21,741	26,842	6,553	10,282	9,793	7,557
1966-67	55,142	25,352	95,549	35,702	23,506	25,145	6,930	12,866	10,008	8,236
1967-68	84,858	56,474	98,056	44,479	27,158 (3)	27,347	7,673	13,487	12,851	9,867
1968-69	86,681	69,517	102,349	52,843	...	23,467	...	13,811	11,585	11,055
1969-70	...	...	...	...	...	...	...	11,022	11,087	12,091
1970-71										

1) "Grado elemental y superior" of the Bachillerato Tecnico.

2) "Aprobados en la Prueba Final".

3) "Pre-Universitário".

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Table VI.a

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science	478	536	642	680	622	1,161	1,005	1,190	1,346	1,524	1,787	
Architecture	84	93	88	81	145	180	191	153	246	307	285	
Technology	630	657	758	1,052	966	1,209	1,232	1,020	1,262	1,640	1,774	
Agriculture	297	201	196	176	234	284	148	181	137	322	549	
Total Science and Technology	1,489	1,487	1,684	1,999	1,967	2,834	2,576	2,544	2,991	3,793	4,395	
Medical Sciences	1,978	1,500	1,912	1,662	2,022	2,121	2,264	2,324	2,665	2,986	3,188	
Humanities	742	828	774	859	1,209	1,018	1,054	1,775	1,930	1,957	2,259	
Education	-	-	-	-	-	-	-	-	-	-	-	
Fine Arts	-	-	-	-	-	-	-	-	-	-	-	
Law	1,509	1,285	1,314	1,160	1,079	1,116	1,161	1,215	1,454	1,587	1,285	
Social Sciences	138	188	189	176	334	345	502	378	827	732	964	
Other	-	-	-	-	-	-	-	-	-	-	-	
Total	5,856	5,288	5,873	5,846	6,611	7,434	7,557	8,236	9,867	11,055	12,091	

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Table VI.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of study	1959-60	1969-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science			-	-	-	-	-	-	-	-	-	
Architecture			-	-	-	-	-	-	-	-	-	
Technology			3,395	3,114	4,743	5,926	5,847	5,885	8,115	6,931	6,236	
Agriculture			-	-	-	-	-	-	-	-	-	
Total Science and Technology			3,395	3,114	4,743	5,926	5,847	5,885	8,115	6,931	6,236	
Medical Sciences			2,016	2,125	2,585	2,782	2,959	3,117	3,813	3,946	4,059	
Humanities			-	-	-	-	-	-	-	-	-	
Education			-	-	-	-	-	-	-	-	-	
Fine Arts			523	489	420	484	447	481	378	196(1)	207(1)	
Law			-	-	-	-	-	-	-	-	-	
Social Sciences			737	638	649	640	540	525	545	512	585	
Other			-	-	-	-	-	-	-	-	-	
Total	...	...	6,671	6,396	8,397	9,832	9,793	10,008	12,851	11,585	11,087	

1) The students of the "Conservatories" are not included.

Table VII

TEACHERS AND PROFESSORS BY EDUCATIONAL LEVEL

Level of Education (1)	Full-time		Part-time		Total	
	1961-62	1970-71	1961-62	1970-71	1961-62	1970-71
Primary and pre-primary					99,448	144,700
Secondary General					22,711	62,269
Technical and Vocational (2)					3,914	6,161
Teachers' Colleges					2,529	2,179
Non-university type higher education					..	..
University					6,896	14,504 (3)

1) Country's definitions.

2) Are only included professors of the schools of "Técnica de Grado Medio", "Audantes Técnicos Sanitarios", and "Comercio". The corresponding number of students is: 70,678 (1961-62) and 107,800 (1970-71).

3) Year 1969-1970.

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Table VII.a

TEACHERS AND PROFESSORS IN PRIVATE SCHOOLS BY EDUCATIONAL LEVEL

Level of Education	Full-time		Part-time		Total	
	1961-62	1970-71	1961-62	1970-71	1961-62	1970-71
Primary and pre-primary					21,921	45,331
Secondary General						40,684
Technical and Vocational					..	..
Teachers' Colleges					856	990
Non-university type higher education					..	..
University					87	1,052(1)

1) Year 1969-1970.

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Table VII.b

TEACHING STAFF IN UNIVERSITIES BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1959-60				1967-68			
	Senior Level	Middle Level	Junior Level	Total	Senior Level	Middle Level	Junior Level	Total
Pure Science	153	364	449	966	278	1,550	-	1,828
Architecture	33	30	46	109	65	460	118	643
Technology	218	221	443	882	314	1,340	653	2,307
Agriculture	73	139	141	353	113	473	206	792
Total Science and Technology	477	754	1,079	2,310	770	3,823	977	5,570
Medical Sciences	223	436	1,089	1,748	321	1,669	-	1,990
Humanities	186	282	377	845	328	1,329	-	1,657
Education	-	-	-	-	-	-	-	-
Fine Arts	-	-	-	-	-	-	-	-
Law	153	234	600	987	251	590	-	841
Social Sciences	62	75	286	423	84	462	-	546
Total	1,101	1,781	3,431	6,313	1,754	7,873	977	10,604

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Table VII.c

TEACHING STAFF IN NON-UNIVERSITY TYPE HIGHER EDUCATION BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1959-60				1967-68			
	Senior Level	Middle Level	Junior Level	Total	Senior Level	Middle Level	Junior Level	Total
Pure Science	-	-	-	-	-	-	-	-
Architecture	-	-	-	-	-	-	-	-
Technology	308	271	1,020	1,599	991	1,719	431	3,141
Agriculture				194	-	-	-	-
Total Science and Technology				1,793	991	1,719	431	3,141
Medical Sciences (1)	-	-	-	253	664	493	32	1,189 (1)
Humanities	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-
Fine Arts	148	43	115	306	188	102	-	290
Law	-	-	-	-	-	-	-	-
Social Sciences	84	76	234	394	132	100	-	232
Total				2,746	1,975	2,414	463	4,852 (1)

1) Excluding 186 professors of "Puericultura y Sanidad" for whom data by level were not available.

SPAIN

Table VII.d

TEACHING STAFF IN VOCATIONAL SCHOOLS BY FIELD OF SPECIALISATION

Field of Specialisation	Full-time staff		Part-time staff		Total	
	1961-62	1969-70	1961-62	1969-70	1961-62	1969-70
1. Technical and Vocational (lower level) (Total)					11,124	13,809
- "Formacion profesional industrial"					8,343	11,379
- "Comercio" (Grade "pericial")					916	657
- "Artisticas"					1,551	1,092
- "Nautico-Pesquera"					55	389
- "Capacitacion Agraria"					259	292
2. Technical and Vocational (upper level) (Total)					4,729	5,140
- "Bachillerato Técnico"					3,551	4,901
- Preparatory of the "Técnicas de Grado Medio"					1,178	239
Total					15,853	18,949

SPAIN

Table VIII

EDUCATIONAL EXPENDITURE (1969)

At current prices

Millions of Pesetas

Type of Expenditure	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher eudcation	Univer-sities	Other expenditure for education(1)	General expendi-ture	Total expendi-ture
I. Central government									
1. Current expenditure	15,391	2,916	1,340			2,457		1,400	23,504
- remuneration of teaching staff	15,072	2,235	1,036			473		-	18,816
- other	319	681	304			1,984		1,400	4,688
2. Investment	4,335	3,939	1,430			2,273		848	12,825
3. Subsidies and transfers									
4. Total Central Government expenditure for education									
II. Private education									
1. Current expenditure									
- of which: remuneration of teaching staff									
2. Investment									

1) For example, pre-primary education, special education.

Source: La Reforma Educativa en marcha (Aplicación de la Ley de Educación 1971).p. 197.

SPAIN Table IX

DISTRIBUTION OF UNIVERSITY STUDENTS BY FATHER'S PROFESSION

Father's profession(1)	Students	
	1959-60	1969-70
I. Professional, Technical and Related Workers		
II. Administrative, Executive and Managerial Workers		
- Government		
- Other		
III. Clerical and Sales Workers		
- Working Proprietors		
- Other		
IV. Agricultural and Related Workers		
- Farmers, Farm Managers		
- Other		
V. Manual Workers		
- Skilled		
- Semi-skilled		
- Unskilled		
VI. Service Workers		
VII. Others and not specified		
Total		

1) The seven occupational groups shown here correspond to major and minor groups of the International Standard Classification of Occupations.

SPAIN

Table X

DISTRIBUTION OF UNIVERSITY STUDENTS BY TOWN OF PARENTS' RESIDENCE

Towns of more than 100,000 inhabitants	Population Census 1960	Students 1960-61	Population Census 1970	Students 1970-71
Rest of the country				
Total				

SPAIN

Table XI

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY:
NUMBER OF PERSONS WITH UNIVERSITY DIPLOMAS BY FIELD BY STUDY

Sector of economic activity Field of study	1964				1970			
	Agriculture	Industry (1)	Other Sectors	Total	Agriculture	Industry	Other Sectors	Total
Pure Science								
Architecture and Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities and Fine Arts								
Education								
Law								
Social Sciences								
Total	400	14,600	95,700	110,700	1,000	30,200	130,300	161,500

1) Industry: mining, manufacturing, construction and electricity.

SPAIN

Table XI.a

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY:
NUMBER OF PERSONS WITH NON-UNIVERSITY TYPE HIGHER EDUCATION DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of Study	1964				1970			
	Agriculture	Industry (1)	Other Sectors	Total	Agriculture	Industry (1)	Other Sectors	Total
Pure Science								
Architecture and Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities and Fine Arts								
Education								
Law								
Social Sciences								
Total	2,000	40,100	175,200	217,300	3,400	57,800	211,600	272,800

1) Industry: mining, manufacturing, construction and electricity.

SPAIN

Table XII

PRE-PRIMARY EDUCATION

	1959-60	1969-70	1970-71
I. Enrolments			
a) Public schools	273,676	353,400	362,940
b) Private schools(1)	198,179	412,780	456,974
II. Teachers			
a) Public schools	13,336	9,351	...
b) Private schools		10,239	...
III. Expenditure			
a) Central Government			
- Teachers			
- Subsidies to local authorities			
- Subsidies to private education			
- Other			
b) Private			
- Teachers			
- Other			
c) Local authorities			
- Teachers			
- Other			

1) Including church schools.

SOURCES

Reply of the Spanish authorities.

Estadistica de la Enseñanza Superior en España published by the National Institute of Statistics (1950/51 to 1969/70).

Estadistica de la Enseñanza Media en España (I,II) (1950/51 to 1969/70).

Estadistica de la Enseñanza Primaria en España (1950/51 to 1969/70).

Anuario estadistico (for the years concerned).

Development of Higher Education 1950-67 - Statistical Survey, OECD, 1970.

Study on Teachers - Statistical Data - Spain, OECD, 1969.

Datos y cifras de la Enseñanza en España (for the years concerned).

TURKEY

EDUCATIONAL CLASSIFICATION

The following educational levels (and fields of study) are presented by reference to the "conversion key" for Turkey (OECD classification).

1. Primary education

The first five years of schooling covering the period of compulsory education.

2. General secondary education

Education provided in:

- The "Ortaokullar" (middle schools) which are the first cycle of the secondary general education (3-year period of studies).
- The "Liseler" (high schools) which are the second cycle of secondary general education (also of 3-year duration).
- The "Imam Hatip Okullari" (Moslem religious teacher training schools).

3. Secondary technical and vocational education

Includes all technical and vocational schools at secondary level as defined in the Turkish statistics ("Mesleki ve teknik ortaögretim okullari") with the exception of the religious schools mentioned above under 2 and the teachers colleges.

4. Teachers colleges

Primary teacher training education (Ilk öğretmen okullari).

5. Non-university type higher education

See list of the educational institutions included under this title at the end of this note on p.189.

6. University type higher education

See list of institutions included under this title at the end of this note on p.189.

NOTES ON THE TABLES

Table I: Enrolments by educational level and year of age and enrolment ratios

Enrolments for children age "X" represents the number of children who had attained that age at the beginning of the school year.

Table III.a: University type higher education: number of candidates, new entrants and enrolments by field of study

(The following definitions which apply to Table III.a, university type higher education, may be adapted to other tables in which the defined terms are used.)

- Candidates: all persons seeking admission to university type higher education.
- New entrants: first-year students registered for the first time.
- Field of study: the OECD classification of higher education by field of study is given on the next page.

Table IX: Distribution of university students by father's profession

The seven occupational groups shown in this table correspond to Major and Minor Groups of the International Standard Classification of Occupations (see p.254).

Table XI: Education by sector of economic activity: number of persons with university diplomas by field of study

The grouping by sector of economic activity is based on the International Standard Industrial Classification of all Economic Activities (ISIC) (see p.255).

CLASSIFICATION OF HIGHER EDUCATION
BY FIELD OF STUDY

1. University Level

- Edebiyat Fakültesi (Arts Faculty)

	OECD Classification
Türk Dili ve Edebiyati (Turkish Language and Literature)	Humanities
Tarih (History)	"
Cografya (Geography)	Social Sciences
Felsefe (Philosophy)	Humanities
Klâsik Sark Dilleri (Classical Oriental Languages)	"
Eski On Asyo Dilleri ve Kültürleri (Language and Civilisation of Asia Minor)	"
Hindoliji (Indian Studies)	"
Sinoloji (Chinese Studies)	"
Arkeoloji (Archaeology)	"
Sanat Tarihi (History of Art)	"
Antropoloji (Anthropology)	"
Rus dili ve Edebiyati (Russian Language and Literature)	"
Alman dili ve Edebiyati (German Language and Literature)	"
Fransiz dili ve Edebiyati (French Language and Literature)	"
Ingiliz dili ve Edebiyati (English Language and Literature)	"
Italyan dili ve Edebiyati (Italian Language and Literature)	"
Klâsik Filoloji (Classical Philology)	"
Kütüphanecilik (Library Studies)	"
Hungaroloji (Hungarian Studies)	"
Tiyatro (Theatre)	"
Arap ve Fars dilleri ve edebiyatlari (Arab and Persian Language and Literature)	"
Klâsik dilleri ve edebiyatlari (Classical Languages and Literature)	"
Psikoloji (Psychology)	"
Pedegoji (Pedagogy)	Education
Sosyoloji (Sociology)	Social Sciences
Sosyal Antropoloji ve Etnoloji (Social Anthropology and Ethnology)	"
Arkeoloji ve Prehistorya (Archaeology and Pre-history)	Humanities
Ingiliz Filolojisi (English Philology)	"

Fransiz Filolojisi (French Philology)	Humanities
Alman Filolojisi (German Philology)	"
- Fen Fakültesi (Faculty of Science)	
Matematik (Mathematics)	Pure Sciences
Kimya (Chemistry)	"
Fizik (Physics)	"
Tabiiye (Natural Science)	"
Fizik Mühendis (Engineering Physicist)	Technology
Astronomi (Astronomy)	Pure Sciences
Jeoloji (Geology)	"
Zooloji (Zoology)	"
Botanik (Botany)	"
Jeofizik (Geophysics)	"
Yüksek Jeoloji (Higher Geology)	"
Biyoloji (Biology)	"
- Siyasal Bilgiler Fakültesi (Faculty of Political Science)	
Mâliye ve Iktisat Bölümü (Finance and Economy Section)	Social Sciences
Siyasi sube (International Relations Section)	"
Idâre bölümü (Administration Section)	"
- Hukuk Fatültesi (Law Faculty)	Law
- Iktisat Fakültesi (Faculty of Economic Science)	Social Sciences
- Tip Fakültesi (Faculty of Medicine)	Medical Sciences
- Eczacilik Fakültesi (Faculty of Pharmacy)	"
- Dis Hekimligi Fakültesi (Faculty of Dental Medicine)	"
- Veteriner Fakültesi (Faculty of Veterinary Medicine)	Agriculture
- Ziraat Fakültesi (Faculty of Agriculture)	
Toprak Ilmi (Soil studies)	Pure Sciences
Genel ziraî bilgiler (General Agricultural Studies)	Agriculture
Ziraat makinalari (Agricultural Machinery)	"
Hayvan yetistirme ve islâhi (Breeding and improvement of cattle)	"
Tarla bitkileri yetistirme ve islâhi (Cultivation and improvement of crops and root plants)	"
Ziraat ekonomisi (Agricultural Economy)	"
Bahce bitkileri yetistirme ve islâhi (Horticulture)	"
Ev ekonomisi (Domestic Economy)	Social Sciences
Ziraat teknolojisi (Agricultural Technology)	" Agriculture
Bitki sagligi (Plant Hygiene)	"

Zooteknik (Zootechnics)	Agriculture
- Orman Fakültesi (Faculty of Forestry)	"
- Kimya Fakültesi (Faculty of Chemistry)	Pure Sciences
Note: The chemical engineers course, previously under the jurisdiction of the Faculty of Science in Istanbul,is now under that of the Faculty of Chemistry founded in 1966-67.	
- Egitim Fakültesi (Faculty of Education)	Education
- Isletme Fakültesi (Faculty of Business Administration and Management)	Social Sciences
Ilahiyat Fakültesi (Faculty of Theology)	Humanities
- Istanbul Teknik Universitesi (Technical University of Istanbul)	
Elektrik Fakültesi (Faculty of Electricity)	Technology
Makina Fakültesi (Faculty of Mechanics)	"
Insaat Fakültesi (Faculty of Construction)	"
Maden Fakültesi (Faculty of Mining)	"
Mimarlik Fakültesi (Faculty of Architecture)	Architecture
Kimya Fakültesi (Faculty of Chemistry)	Technology
- Macka Teknik Okulu (Engineering School of "Macka")	"
- Ortadogu Teknik Universitesi (Technical University of the Middle East)	
Mühendislik Fakültesi (Faculty of Engineering Science)	"
Idari ilimler Fakültesi (Faculty of Administrative Sciences)	Social Sciences
Mimarlik Fakültesi (Faculty of Architecture)	
Mimari (Architecture)	Architecture
Sehir ve bölge Planlama (Town and Country Planning)	"
Restorasyon (Restoration)	Fine Arts
Fen ve Edebiyat Fakültesi (Faculty of Arts and Sciences)	
Fizik (Physics)	Pure Sciences
Kimya (Chemistry)	"
Matematik (Mathematics)	"
Sosyal ilimler (Social Sciences)	Social Sciences

- Yabanci diller yüksek okullari (Higher Schools of Modern Languages)	Social Sciences
- Hacettepe mezuniyet sonrasi egitim yüksek okulu (Secondary Teacher Training College for Post-graduates at Hacettepe)	Education
- Güzel Sanatlar Academisi (Fine Arts Academy)	
Yüksek resim (Drawing)	Fine Arts
Yüksek heykel (Sculpture)	"
Yüksek dekoratif (Decorative Art)	"
Yüksek mimarlik (Architecture)	Architecture
- Devlet Konservatuvari Yüksek Kismi (Advanced Section of State Conservatory)	Fine Arts
- Yüksek Islâm Enstitüleri (Higher Institute of Islamic Studies)	Social Sciences
Yüksek Ogretmen Okullari (Secondary Teacher Training Colleges)	Education
- Yüksek Teknik Ogretmen Okullari (Secondary Technical Teacher Training Colleges)	"
- Ticaret Ye turizme Yüksek Ogretmen Okulu (Secondary Teacher Training College of Tourism and Commerce)	"
- "Robert Kollej" Yüksek okulu (Higher School - "Robert Kollej")	According to Section
- Yüksek denizcilik okulu (Higher Naval College)	Others

2. Non-University Level

Iktisadî ve ticarî ilimler academileri (Academy of Economy and Commerce)	Social Sciences
Tatbiki Güzel Sanatlar Yüksek Okulu (Higher School of Applied Art)	Fine Arts
Egitim Enstitüleri (Pedagogic Institutes)	Education
Tekniker Yüksek okullari (Higher Technicians Schools)	Technology
Yüksek sağlik okullari (Higher Health Schools)	Medical Science
Veteriner yardimcisi Okulu (School for Veterinary Assistants)	Agriculture
Bölge orman ve ziraat okullari (Regional Schools of Agriculture and Forestry)	"

Sosyal hizmetler academisi (Academy of Social Services)	Social Sciences
Polis enstitüsü (Higher Police Institute)	Others
Harp okullari (Higher Military Schools)	"
Gazetecilik okulu (School of Journalism)	Social Sciences
Yüksek teknik okullari (Higher Technical Schools)	Technology

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TURKEY

Table I

ENROLMENTS BY EDUCATIONAL LEVEL AND YEAR OF AGE
AND ENROLMENT RATIOS

Year of Age	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	University	Total enrolments	Population	Enrolment ratios
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30 and over									
Total									

TURKEY

Table II

ENROLMENTS

Year	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	University	Total enrolments
1959-60	2,514,592	321, 400	71,830	21,141	13, 196	42,037	2,984,196
1960-61	2,866,501	371, 446	79,218	23,316	18, 609	48,081	3,407,171
1961-62	3,147,146	412, 095	82,501	26,725	17, 771	54,428	3,740,666
1962-63	3,370,679	446, 243	85,793	31,847	21, 635	52,711	4,008,908
1963-64	3,562,140	456, 347	101,821	36,130	25, 787	54,356	4,236,581
1964-65	3,769,282	463, 153	107,873	42,295	25, 686(1)	59,865	4,468,154
1965-66	3,971,939	537, 032	109,818	47,946	34, 866(2)	63,667	4,765,268
1966-67	4,273,977	675, 459	117,867	54,469	42, 987(2)	67,195	5,231,954
1967-68	4,509,433	779, 897	116,521	57,788	125,647		5,589,286
1968-69	4,736,867	862, 503	115,595	60,758	143,279		5,919,002
1969-70	4,892,590	966, 841	124,622	62,584	147,000		6,193,637
1970-71	5,011,926	1, 113, 913	129,815	64,949	61, 478	95, 425	6,477,506

1) Excluding students of Agriculture.
2) Excluding students of Agriculture and Medical Sciences.

Sources: From 1959-60 to 1967-68, Turkish General Statistical Yearbooks.
From 1968-69 to 1969-70, Turkiyede Sayisi 1960-1971.
For 1970-71, Milli Eğitim Istatistikleri: Oğretim Yili Basi 1970-71.
Replies of the Turkish authorities.

TURKEY

Table II.a

NUMBER OF STUDENTS IN PRIVATE SCHOOLS

Level of Education	1959-60	1970-71
Primary	24,785	24,349
Secondary General	22,897(1)	42,494(1)
Technical and Vocational	1,737(2)	1,339(2)
Teachers' Colleges	-	-
Non-university type higher education	..	40,231
University		
Total	50,329	108,413

1) Excluding religious schools.

2) Imam schools, 1st and 2nd cycle of commercial schools, nurses schools, technician schools and schools of journalism.

Table II.b

NUMBER OF FEMALE STUDENTS IN PUBLIC AND PRIVATE SCHOOLS

Level of Education	1959-60	1970-71
Primary	931,794	2,120,332
Secondary General	80,191	290,370
Technical and Vocational	27,902	51,618
Teachers' Colleges	5,292	30,427
Non-university type higher education	(1,300)	9,148
University	9,810	22,147
Total	1,056,289	2,524,042

TURKEY

Table II.c

ENROLMENTS IN THE FIRST AND THE LAST YEAR OF STUDIES

Level of Education	1960-61		1970-71	
	First Year	Last Year	First Year	Last Year
Primary				
Secondary General				
Technical and Vocational				
Teachers' Colleges				
Non-university type higher education				
University				

TURKEY

Table II.d

ENROLMENTS IN SECONDARY GENERAL EDUCATION

Year	1st cycle "Orta Okullari"	2nd cycle "Liseler"	Ecclesiastical schools "Imam hatip okullari" (Orta Okullari ve lise)	Total
1959-60	254,966	62,368	4,066	321,400
1960-61	291,266	75,632	4,548	371,446
1961-62	318,138	88,582	5,375	412,095
1962-63	337,816	101,387	7,040	446,243
1963-64	344,139	102,384	9,824	456,347
1964-65	354,257	97,935	10,961	463,153
1965-66	412,373	111,181	13,478	537,032
1966-67	515,337	139,914	20,208	675,459
1967-68	590,408	160,357	29,132	779,897
1968-69	642,963	181,577	37,963	862,503
1969-70	711,008	211,982	43,851	966,841
1970-71	810,893	253,712	49,308	1,113,913
1971-72				

TURKEY

Table III

NEW ENTRANTS

Year	Primary	Secondary General(1)	Technical and vocational	Teachers' Colleges	Non-university type higher education	University
1959-60						
1960-61	657,179	145,493	36,465	5,554		
1961-62	696,708	152,153	41,342	8,356		
1962-63	669,976	156,388	50,919	10,184		
1963-64	669,726	152,222	66,556	9,685		
1964-65	713,587	174,807	65,908	14,458		
1965-66	735,881	221,276	63,850	13,904	11,909 2)	16,046
1966-67	888,985	272,590	61,874	15,872	15,273 2)	15,077
1967-68	873,566	208,611	39,711	19,172		
1968-69	892,701	228,189	44,697	19,871		
1969-70	892,782	264,718	45,090	16,878		
1970-71	938,156	301,724	55,242	17,759	22,174	17,619

1) Excluding religious schools.

2) Excluding new entrants in Agriculture.

Source : Milli Egitim Istatistikleri, 1961-65, 1965-67, 1970-71 (Devlet Istatistik Enstitüsü).
Development of Higher Education, 1950-1967, OECD, 1970
Replies of the Turkish authorities.

TURKEY

Table III.a

UNIVERSITY TYPE HIGHER EDUCATION:
NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1970-71	1959-60	1970-71	1959-60	1970-71
Pure Science			423	1,976	5,925	10,136
Architecture			262	3,769	512	19,497
Technology			1,356		2,630	
Agriculture			915	878	3,578	4,681
Total Science and Technology			2,956	5,745	12,645	34,314
Medical Sciences			1,254	5,000	4,976	20,856
Humanities			...	1,722	5,154	11,600
Education			...	763	1,249	3,612
Fine Arts			...	431	550	1,716
Law			...	1,443	12,501	14,557
Social Science			...	2,457	4,753	8,556
Other			...	58	209	214
Total			...	17,619	42,037	95,425

TURKEY

Table III.b

NON-UNIVERSITY TYPE HIGHER EDUCATION:

NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates		New Entrants		Enrolments	
	1959-60	1970-71	1959-60	1970-71	1959-60	1970-71
Pure Science			-	-	-	-
Architecture			-	-	-	-
Technology			...	6,300	2,293	19,279
Agriculture			330	...	601	...
Total Science and Technology			...	6,300(1)	2,894	19,279(1)
Medical Sciences			155	175	579	356
Humanities			-	-	-	-
Education			...	2,639	1,775	6,722
Fine Arts			-	-	-	-
Law			-	-	-	-
Social Science			...	12,884	7,948	34.617
Other			-	176	-	497
Total			...	22.174	13,196	61.478

1) Excluding students ofAgriculture.

TURKEY

Table IV

HIGHER EDUCATION:

NUMBER OF FEMALE STUDENTS BY FIELD OF STUDY

Field of Study	University		Non-university type higher education	
	1959-60	1970-71	1959-60	1970-71
Pure Science	1,757	2,367	-	-
Architecture	87		-	-
Technology	91	1,528	30	1,405
Agriculture	371	375	...	...
Total Science and Technology	2,306	4,270	...	1,405 (1)
Medical Sciences	1,022	6,965	...	299
Humanities	2,584	4,593	-	-
Education	638	1,523	227	2,353
Fine Arts	135	606	-	-
Law	2,492	2,746	-	-
Social Science	633	1,444	392	4,259
Other	-	-	-	7
Total	9,810	22 147	...	8,323 (1)

1) Excluding students of Agriculture.

TURKEY Table V

HIGHER EDUCATION: FOREIGN STUDENTS IN THE COUNTRY AND NATIONALS STUDYING ABROAD BY FIELD OF STUDY

Field of Study	Foreign students		Nationals studying abroad	
	1960	1970	1960	1970
Pure Sciences	..	604	..	..
Technology	..	1,944	..	..
Medical Sciences	..	1,442	..	..
Other	..	1,940	..	..
Total	..	5,930	..	..

TURKEY

Table VI

GRADUATES

Year	Primary	Secondary General			Technical and vocational	Teachers' Colleges	Non-university type higher education	University First degree of studies
		1st Cycle	2nd Cycle	Ecclesiastical schools				
1959-60	283,790	40,253	10,913	745	18.829	3,225	2,705	3,953
1960-61	304,406	42,674	11,977	701	18,323	4,362	2,196	4,020
1961-62	330,591	50,707	14,241	778	19,907	5,150	3,156	4,518
1962-63	362,354	58,151	16,915	885	19,803	6,409	3,337	4,519
1963-64	391,989	66,661	19,578	1,017	21,647	7,935	3,709	5,437
1964-65	447,933	73,986	23,227	1,147	23,582	8,443	4,008	6,032
1965-66	510,397	79,583	24,795	1,598	23,068	9,729	4,268	6,488
1966-67	541,024	85,590	26,067	2,207	31,096	11,622	5,775	7,120
1967-68	549,464	86,388	26,536	2,727	29,002	16,558	8,163	7,500
1968-69	625,226	115,549	30,494	3,097	28,926	16,643	7,857	9,464
1969-70	718,012	127,740	32,780	3,926	30,663	16,339	10,917	10,234
1970-71	754,265	148,593	43,459	6,696	32,033	17,600	12,084	10,933

TURKEY

Table VI.a

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY

(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-
Pure Science	182	243	291	384	349	790	541	596	776	993	1,234	
Architecture	105	116	117	86	84	90	84	69	105	217	157	
Technology	417	473	445	348	419	475	419	476	438	806	697	
Agriculture	564	503	642	583	623	733	639	817	847	680	632	
Total Science and Technology	1,268	1,335	1,495	1,401	1,475	2,088	1,683	1,958	2,166	2,696	2,720	
Medical Sciences	760	792	775	662	672	787	1,011	1,028	1,060	1,242	1,102	
Humanities	305	323	375	425	623	1,069	1,536	1,556	1,158	1,151	1,074	
Education	269	198	309	405	686	420	452	633	695	851	1,026	
Fine Arts	135	135	138	180	394	273	164	192	192	183	209	
Law	762	781	845	802	789	613	816	1,059	979	1,323	2,030	
Social Science	422	399	536	578	757	745	782	635	1,164	1,946	2,016	
Other	32	57	45	66	41	37	44	59	86	72	57	
Total	3,953	4,020	4,518	4,519	5,437	6,032	6,488	7,120	7,500	9,464	10,234	

TURKEY

Table VI.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY
(1st degree of studies)

Field of study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science	-	-	-	-	-	-	-	-	...	...	...	
Architecture	-	-	-	-	-	-	-	-	...	...	...	
Technology	457	448	469	594	597	663	571	1,130	...	...	...	
Agriculture	...	...	...	...	...	...	...	...	...	...	...	
Total Science and Technology	...	...	...	...	...	...	...	...	...	...	...	
Medical Sciences	...	...	...	...	...	...	73	80	...	...	...	
Humanities	-	-	-	-	-	-	-	-	...	...	...	
Education	779	803	953	989	1, 481	1,755	2,150	2,651	...	...	...	
Fine Arts	-	-	-	-	-	-	-	-	...	...	...	
Law	-	-	-	-	-	-	-	-	...	...	...	
Social Science	750	727	1,059	1,029	881	899	1,428	1,804	...	...	...	
Other	-	-	...	...	...	...	46	110	...	...	...	
Total	2,705	2,196	3,156	3,337	3,709	4,008	4,268[1]	5,775[1]	8,163	7,857	10,917	

[1] Excluding graduates in Agriculture.

TURKEY

Table VII

TEACHERS AND PROFESSORS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		Total	
	1959-60	1970-71	1959-60	1970-71	1959-60	1970-71
Primary					54,049	132,577
Secondary General					15,138	33,984
Technical and Vocational					6,209	10,882
Teachers' Colleges					872	2,610
Non-university type higher education					970	2,378
University					3,161	8,249
Total					80,399	190,680

Sources: *Turkish General Statistical Yearbook 1959-60*.
Milli Eğitim Istatistikleri (Ögretim Yili Basi) 1970-71.

TURKEY Table VII.a

TEACHERS AND PROFESSORS
IN PRIVATE SCHOOLS BY EDUCATIONAL LEVEL

Level of Education	Full-time staff		Part-time staff		Total	
	1959-60	1970-71	1959-60	1970-71	1959-60	1970-71
Primary					1,283	1,211
Secondary General					2,162(1)	4,074(1)
Technical and Vocational					265(2)	266(2)
Teachers' Colleges					-	-
Non-university type higher education						
University					..	1,840
Total						7,391

1) Excluding religious schools.

2) See Note (2), Table II.a.

TURKEY

Table VII.b

TEACHING STAFF IN UNIVERSITIES BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1959-60				1970-71			
	Senior Level	Middle Level	Junior Level	Total	Senior Level	Middle Level	Junior Level	Total
Pure Science				272	153	54	325	532
Architecture				77	454	628	1,154	2,236
Technology				316				
Agriculture				376	247	43	310	600
Total Science and Technology	...	...	...	1,041	854	725	1,789	3,368
Medical Sciences				1,114	761	550	1,928	3,239
Humanities				330	225	79	215	519
Education				207	16	39	240	295
Fine Arts				100	114	33	98	245
Law				132	141	6	72	219
Social Sciences				208	103	62	168	333
Other				29	1	9	21	31
Total	...	...	...	3,161	2,215	1,503	4,531	8,249

Senior Level: "Ordinaryüs profesör" (extraordinary professors), "Profesör" (ordinary professors), "Doçent" (associate professor).

Middle Level: "Oğretim görevlisi"(full-time lecturer - who has not the status of assistant, associate and full professors), "Okutman" (lecturer), "Uzman" (experts).

Junior Level: "Asistan" (assistants), "Oğretmen" (teachers), "Vekil öğretmen" (part-time teachers). (These last two types of staff are teaching from the primary level up to university level).

TURKEY

Table VII.c

TEACHING STAFF IN NON-UNIVERSITY TYPE HIGHER EDUCATION BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1959-60				1970-71			
	Senior Level	Middle Level	Junior Level	Total	Senior Level	Middle Level	Junior Level	Total
Pure Science					-	-	-	-
Architecture					-	-	-	-
Technology					233	519	414	1,166
Agriculture					...	...	...	...
Total Science and Technology	...	...	...	457	233	519	414	1,166(1)
Medical Sciences					24	49	31	104
Humanities					-	-	-	-
Education					4	21	399	424
Fine Arts					-	-	-	-
Law					-	-	-	-
Social Science					291	248	110	649
Other					7	-	28	35
Total	...	...	...	970	559	837	982	2,378(1)

1) Excluding teachers of Agriculture.

TURKEY

Table VIII

EDUCATIONAL EXPENDITURE (1969-70)

At current prices — Millions of Turkish Lira

Type of Expenditure	Primary	Secondary General	Technical and vocational	Teachers' Colleges	Non-university type higher education	University	Other expenditure for education (1)	General expenditure	Total expenditure
I. Central Government									
1. Current expenditure	1,039	487	189	119	553			140	2,527
- remuneration of teaching staff	958								
- other	81								
2. Investment									1,000
3. Subsidies and transfers									
4. Total Central Government expenditure for education									
II. Private Education									211.0
1. Current expenditure									...
- of which: remuneration of teaching staff									...
2. Investment									...
III. Local Authorities									
1. Current expenditure									95.8
- of which: remuneration of teaching staff									...
2. Investment									...

1) For example, pre-primary education, etc.

TURKEY

Table IX

DISTRIBUTION OF UNIVERSITY STUDENTS BY FATHER'S PROFESSION

Father's profession(1)	Students	
	1959-60	1969-70
I. Professional, Technical and Related Workers		
II. Administrative, Executive and Managerial Workers		
- Government		
- Other		
III. Clerical and Sales Workers		
- Working Proprietors		
- Other		
IV. Agricultural and Related Workers		
- Farmers, Farm Managers		
- Other		
V. Manual Workers		
- Skilled		
- Semi-skilled		
- Unskilled		
VI. Service Workers		
VII. Others and not specified		
Total		

1) The seven occupational groups shown here correspond to major and minor groups of the International Standard Classification of Occupations.

TURKEY

Table X

DISTRIBUTION OF UNIVERSITY STUDENTS BY TOWN OF PARENTS' RESIDENCE

Towns of more than 100,000 inhabitants	Population Census 1960	Students 1960-61	Population Census 1970	Students 1970-71
Rest of the Country				
Total				

TURKEY

Table XI

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: NUMBER OF PERSONS WITH UNIVERSITY DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of study	1960				1970			
	Agriculture	Industry (1)	Other Sectors	Total	Agriculture	Industry (1)	Other Sectors	Total
Pure Science					134	3,584	6,944	10,662
Architecture					17	2,698	5,576	8,291
Technology					-	894	3,305	4,199
Agriculture					3,930	1,010	7,599	12,539
Total Science and Technology					4,081	8,186	23,424	35,691
Medical Sciences					117	754	22,827	23,698
Humanities					7	251	5,300	5,558
Fine Arts					-	6	363	369
Education					6	534	1,979	2,519
Law					176	718	20,001	20,895
Social Science					41	1,720	9,497	11,258
Other					354	1,109	10,309	11,772
Total					4,782	13,278	93,700	111,760

1) Industry: mining, manufacturing, construction and electricity.

TURKEY

Table XI.a

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: NUMBER OF PERSONS WITH NON-UNIVERSITY TYPE HIGHER EDUCATION DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of study	1960				1970			
	Agricul-ture	Industry (1)	Other Sectors	Total	Agricul-ture	Industry (1)	Other Sectors	Total
Pure Science								
Architecture								
Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities								
Fine Arts								
Education								
Law								
Social Science								
Other								
Total								

1) Industry: mining, manufacturing, construction and electricity.

TURKEY

Table XII

PRE-PRIMARY EDUCATION

	1961-62	1970-71
I. Enrolments		
a) Public schools	-	172
b) Private schools	2,720	4,029
II. Teachers		
a) Public schools	-	7
b) Private schools	102	178
III. Expenditure		
a) Central Government		
- Teachers		
- Subsidies to local authorities		
- Subsidies to private education		
- Other		
b) Private		
- Teachers		
- Other		
c) Local authorities		
- Teachers		
- Other		

SOURCES

Replies of the Turkish authorities.

Statistical Yearbook of Turkey (1959-60 to 1967-68).

Turkiyede Sayisi (1960-71).

Milli Egitim Istatistikleri (Devlet Istatistik Enstitüsü) (1961-1965, 1965-1967, 1970-1971).

Development of Higher Education 1950-67 - *Statistical Survey* OECD, Paris, 1970.

YUGOSLAVIA

EDUCATIONAL CLASSIFICATION(1)

The following educational levels (and fields of study) are presented by reference to the "conversion key" for Yugoslavia (OECD classification).(2)

1. Primary education

Eight years of schooling covering the period of compulsory education.

2. General secondary education

Four-year courses in the "Gimnazije".

3. Secondary technical and vocational education(3)

All technical schools give admission to higher education. The establishments included are:

- "Tehničke i druge strucne škole" (Technical and other vocational schools).
- "Opstetehničke škole" (Technical general education schools) (after 1967-68).

---

1) In Yugoslavia, a number of "school centres" provide different types of education (secondary general education, technical and vocational, skilled worker). Data on enrolments in these centres (and other relevant data such as number of new entrants and graduates) are included in the corresponding educational levels, as presented in this report.

2) With the exception of primary education for which the Yugoslav definition was retained (the eight-year primary school).

3) The schools for training skilled workers ("Škole za kvalifikovane radnike") have not been included here because they provide a "complementary" technical and vocational education. It should be noted, however, that these schools are attended mostly by "young students" (age 15-21). Data for these schools can be found in Table XIII.

- "Umetničke škole" (Schools of Fine Arts).
- "Škole za ostali stručni kadar" (Other schools for the training of high-level professional staff).

4. Teachers colleges

"Škole za obrazovanje nastavnike" (Schools for the training of teachers).

5. Non-university type higher education

Post-secondary two-year schools ("Više škole"). See list of these educational institutions at the end of this note on p. 223.

6. University type higher education

Institutions providing courses from three to six years:

- "Fakulteti" (Faculties)
- "Visoke škole" (Higher Colleges)
- "Umetničke akademije" (Fine Arts Academies).

See list of these institutions at the end of this note on p. 223.

NOTES ON THE TABLES

Table I: Enrolments by educational level and year of age and enrolment ratios

Enrolments for children age "X" represents the number of children who had attained that age at the beginning of the school year.

Table III.a: University type higher education: number of candidates, new entrants and enrolments by field of study

(The following definitions which apply to Table III.a, university type higher education, may be adapted to other tables in which the defined terms are used.)

- Candidates: all persons seeking admission to university type higher education.
- New entrants: first-year students registered for the first time.

- Field of study: the OECD classification of higher education by field of study is given on p. 223.

Table VII.a: Teaching staff in universities by status and field of specialisation

- Senior level (S.L.): full and equivalent professors.
- Junior level (J.L.): assistant lecturers, auxiliaries and other equivalent university teaching staff.
- Middle level (M.L.): those who do not belong to either of the two above-mentioned categories: lecturers, senior lecturers, assistant professors.

Table IX: Distribution of students by father's profession

This table was completed according to the Yugoslav definitions of the occupational groups. For future work, however, and for the purpose of international comparisons, it is suggested that such classification correspond to the Major and Minor Groups of the International Standard Classification of Occupations, as shown on p. 254.

Table XI: Education by sector of economic activity: number of persons with university diplomas by field of study

The grouping by sector of economic activity is based on the International Standard Industrial Classification of All Economic Activities (ISIC) (see p. 255).

CLASSIFICATION OF HIGHER EDUCATION
BY FIELD OF STUDY

1. University level

Fakulteti (Faculties)

	OECD Classification
- Filozofski (Philosophy)	Humanities
- Filološki (Languages)	Humanities
- Prirodno-matematički (Natural Sciences and Mathematics)	Pure Sciences
- Prirodno-matematički i tehnološki (Natural Sciences, Mathematics and Technology)	Pure Sciences
- Za fizičku kulturu (Physical Education)	Education
- Pravni (Law)	Law
- Ekonomski (Economics)	Social Sciences
- Pravno-ekonomski (Law-Economics)	Law
- Fakultet političkih nauka (Political Science)	Social Sciences
- Poljoprivredni (Agriculture)	Agriculture
- Šumarski (Waterways and Forests)	Agriculture
- Poljoprivredno-šumarski (Agriculture-Waterways and Forests)	Agriculture
- Veterinarski (Veterinary Medicine)	Agriculture
- Biotehnički (Biotechnology)	Technology
- Medicinski (Medicine)	Medical Sciences
- Stomatološki (Stomatology)	Medical Sciences
- Farmaceutski (Pharmacy)	Medical Sciences
- Farmaceutsko-biohemijski (Pharmacy-Biochemistry)	Medical Sciences
- Tehnički (Technology)	Technology
- Arhitektonski (Architecture)	Architecture
- Arhitektonsko-urbanistički (Architecture and Town Planning)	Architecture
- Arhitektonsko-gradjevinski-geodetski (Architecture-Building and Construction-Surveying)	Technology
- Gradjevinski (Building and Construction)	Technology
- Geodetski (Surveying)	Technology
- Mašinski (Engineering)	Technology
- Mašinsko-brodogradjevni (Engineering-Ship Building)	Technology
- Saobraćajni (Transport)	Technology
- Elektrotehnički (Electrotechnics)	Technology
- Elektro-mašinski (Electrotechnics-Mechanics)	Technology
- Elektronski (Electronics)	Technology

	OECD Classification
- Hemijsko-tehnološki (Industrial Chemistry)	Technology
- Tehnološki (Industrial Technology)	Technology
- Tehnološko-metalurški (Technology-Metallurgy)	Technology
- Metalurški (Metallurgy)	Technology
- Rudarski (Mines)	Technology
- Rudarsko-geološki (Mines-Geology)	Technology
- Rudarsko-geološko naftni (Nature and Petroleum Working)	Technology
- Rudarsko-metalurški (Mines-Metallurgy)	Technology
- Teološki pravoslavni (Orthodox Theology)	Humanities
- Teološki katolički (Roman Catholic Theology)	Humanities

Visoke škole (Higher Colleges)

- Upravna (Government Administration)	Social Sciences
- Pedagoška akademija (Pedagogic Academies)	Education
- Defektološka (Teachers for special schools)	Education
- Muzička (Music)	Fine Arts
- Industrijsko-pedagoška (Teachers in Industrial Schools)	Education
- Za fizičku kulturu (Physical Education)	Education
- Spoljne trgovine (Foreign Trade)	Social Sciences
- Komercijalna (Commercial Economics)	Social Sciences

Umetničke akademije (Academies of Fine Arts)

- Akademija likovnih umetnosti (Fine Arts Academy)	Fine Arts
- Primenjenih umetnosti (Applied Arts)	Fine Arts
- Muzička (Music)	Fine Arts
- Za pozorišnu umetnost, film, radio i televiziju (Dramatic Art, Film, Radio, Television)	Fine Arts
- Za pozorišnu umenost (Dramatic Art)	Fine Arts

2. **Non-university level**

Više škole (Post-secondary schools)

Više skole za spremanje nastavnika (Post-secondary teacher training schools)

- Pedagoška akademija (Academy of Education)	Education
- Viša pedagoška škole (Special education)	Education
- Viša pedagoška škola za ekonomiku domaćinstva (Home Economics)	Education
- Viša škola za fizičku kulturu (Physical Education)	Education

	OECD Classification
Više pravne i upravne škole (Post-secondary schools of Law and Administration)	
- Viša pravna škola (Law)	Social Sciences
- Viša upravna škola (Administration)	Social Sciences
Više ekonomske škole (Post-secondary schools of Economics)	
- Viša ekonomska škola (Economics, Finance, Bookkeeping, Internal and External Trade)	Social Sciences
- Viša ekonomsko-komercijalna škola (Economics and Commerce)	Social Sciences
- Viša statistička škola (Statistics)	Social Sciences
Više turističke i ugostiteljske škole (Post-secondary schools for Tourism and Hotel Trades)	
- Viša turistička škola (Tourism)	Social Sciences
- Viša turistička škola ekonomskog smera (Tourism-Economics)	Social Sciences
Više saobraćajne i PTT škole (Post-secondary schools for Post, Telecommunications and Transport)	
- Viša PTT škola (Post and Telecommunications)	Technology
- Viša železnicko-saobraćajna škola (Railways)	Technology
- Viša pomorska škola (Navy)	Technology
Više medicinske škole (Post-secondary schools of Medicine)	
- Viša medicinska škole (Medicine)	Medical Sciences
- Viša škola za medicinske sestre JCK (Yugoslav Red Cross Nurses)	Medical Sciences
- Viša stomatološka škola (Stomatology)	Medical Sciences
- Viša škola za socijalne radnike (Training of Social Welfare staff)	Medical Sciences
Više poljoprivredne škole (Post-secondary schools for Agriculture)	
- Viša poljoprivredna škola (Agriculture)	Agriculture
Više tehničke škole (Post-secondary technical schools)	
- Viša tehnička škola (Polytechnics)	Technology
- Viša tehnička gradjevinska škola (Building and Construction)	Technology
- Viša tehnička škola za gradjevnu industriju i gradjevinarstvo (Building Industries and Civil Engineering)	Technology
- Viša geodetska škola (Surveying)	Technology
- Viša tehnička škola za organizaciju rada (Business Management)	Technology

	OECD Classification
- Viša tehnička škola za sigurnost pri radu (Worker's protection against accidents at work)	Technology
- Viša tehnička mašinska škola (Mechanical Engineering)	Technology
- Viša železnička tehnička škola (Railway Engineering)	Technology
- Viša hemijsko-tehnološka škola (Industrial Chemistry)	Technology
- Viša tehnološka škola za nemetale i gradjevinske materijale (Non-ferrous Metallurgy and building materials)	Technology
- Viša tehnička tekstilna škola (Textiles)	Technology
- Viša tehnička obućarska škola (Footwear)	Technology
- Viša grafička škola (Graphic Arts)	Technology

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Table I

ENROLMENTS BY EDUCATIONAL LEVEL AND YEAR OF AGE AND ENROLMENT RATIOS (1970-71)

Age	Primary	Secondary General	School for skilled workers	Technical and vocational	Teachers' Colleges	Non-university type higher education (1)	University (1)	Total enrolments	Population	En m ra
5										
6	69,494							69.494		
7	357,412							357.412		
8	367,211							367.211		
9	370,909							370.909		
10	370,179							370.179		
11	344,811							344.811		
12	328,361							328.361		
13	300,872							300,872		
14	256,948	10,983	11.133	10.426	383			289.873		
15	68,384	46.339	62,954	51,438	1,522			230,637		
16		44.737	86,784	49.759	2,550			183.830		
17		42,989	76.546	[illegible],973	4,084			167.592		
18		33,413	35,176	35,981	4,434	1.311	6,414	116.729		
19		6,220	10.466	10,789	2,756	7.633	28.827	66.691		
20		1.617	2,949	4,685	1,144	10,153	31,034	51.582		
21						6,639	25,136	31,775		
22						4.118	20,513	24.631		
23						2,528	13,664	16.192		
24						1,458	7.624	9,082		
25						692	2,936	3.628		
26						433	1.829	2.262		
27						291	908	1,199		
28						279	800	1.079		
29						216	562	778		
30 years and over						2,050	3,188	5.238		
Total	2,834,581	186,298	286.008	207,051	16,873	37.801	143,435	3,712.047		

1) Full-time students of the FSR of Yugoslavia

YUGOSLAVIA

Table II

ENROLMENTS

Year	Primary	Secondary General	Technical and Vocational	Teachers' Colleges	Non-university type higher education	University	Total enrolments
1959-60	2,589 576	78,750	97,702	25,755	18,754	86,032	2,896,569
1960-61	2,764,369	79,676	115,609	27,950	31,662	108,912	3,128,178
1961-62	2,895,694	94,651	137,983	30,335	40,898	117,112	3,316,673
1962-63	2,960,199	116,171	161,373	31,912	47,782	112,310	3,429,747
1963-64	2,980,220	141,738	174,855	28,716	53,381	107,214	3,486,124
1964-65	2,972,225	161,630	198,203	28,942	63,073	107,426	3,531,499
1965-66	2,945,520	177,237	206,825	27,908	68,650	116,273	3,542,413
1966-67	2,921,607	180,303	203,376	26,558	75,344	120,110	3,527,298
1967-68	2,893,624	181,328	198,903	25,718	82,570	128,240	3,510,383
1968-69	2,875,075	183,360	195,622	24,233	83,947	147,497	3,509,734
1969-70	2,853,069	184,068	197,464	21,194	77,901	161,800	3,495,496
1970-71	2,834,581	186,298	207,051	16,873	81,074	180,129	3,506,006

YUGOSLAVIA Table II.a

NUMBER OF FEMALE STUDENTS IN PUBLIC AND PRIVATE SCHOOLS(1)

Level of Education	1959-60	1969-70	1970-71
Primary	1,205,884	1,326,609	1,318,915
Secondary General	38,329	102,695	103,267
Technical and Vocational	43,082	106,876	112,807
Teachers' Colleges	17,125	13,584	10,774
Non-university type higher education	6,839	33,786	33,786
University	24,799	61,314	69,225
Total	1,336 058	1,644 864	1,648 774

1) No private education in Yugoslavia

YUGOSLAVIA

Table II.b

ENROLMENTS IN THE FIRST AND THE LAST YEAR OF STUDIES

Level of Education	1961-62		1969-70	
	First Year	Last Year	First Year	Last Year
Primary	451,687	203,404	418,447	255,709
Secondary General	40,935	16,493	59,838	38,395
Technical and Vocational				
Teachers' Colleges				
Non-university type higher education				
University	55,276	15,928	75,335	14,833

YUGOSLAVIA

Table III

NEW ENTRANTS

Year	Primary	Secondary General	Technical and Vocational	Teachers' Colleges	Non-university type higher education	University
1959-60	418,829	24,718	32,892 1)	6,907	12,017	31,135
1960-61	414,949	25,275	41,439	7,255	22,682	48,134
1961-62	423,598	38,380	51,031	9,339	27,619	47,383
1962-63	408,632	47,871	57,459	8,869	31,184	38,881
1963-64	395,308	51,594	58,744	7,274	34,487	36,658
1964-65	380,072	53,530	64,061	6,614	40,886	39,160
1965-66	386,907	57,421	64,626	6,601	42,305	43,724
1966-67	379,779	52,741	56,208	5,826	43,643	40,917
1967-68	386,443	54,043	54,679	6,076	47,331	42,484
1968-69	381,430	53,556	55,112	5,203	43,952	54,975
1969-70	374,602	54,829	61,684	3,391	45,639	58,820
1970-71	368,339	54,236	66,384	1,985	48,758	62,651

1) First-year students of Fine Arts.

YUGOSLAVIA

Table III.a

UNIVERSITY TYPE HIGHER EDUCATION:
NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates				New Entrants				Enrolments			
	1954-55	1959-60	1964-65	1969-70	1954-55	1959-60	1964-65	1969-70	1954-55	1959-60	1964-65	1969-7
Pure Science					2,029	2,073	3,098	3,911	5,736	4,956	8,550	12,72
Architecture					891	518	809	1,023	1,997	2,835	2,719	4,74
Technology					4,464	4,538	8,733	13,185	10,714	15,708	24,233	36,97
Agriculture					1,775	2,565	2,910	4,955	4,765	8,543	8,543	11,36
Total Science and Technology					9,159	9,694	15,550	23,074	23,212	32,042	44.045	65,80
Medical Sciences					3,767	2,166	2,898	3,466	9,484	11,040	13,365	15,85
Humanities					5,929	5,642	5,270	7,567	13,540	14,098	12,407	23,62
Education					91	220	1,252	783	259	459	3,193	2,97
Fine Arts					299	365	570	710	1,233	1,412	1,980	2,35
Law					3,325	6,615	5,106	8,878	7,563	14,540	12,379	25,15
Social Science					3,985	6,433	8,514	14,342	7,584	12,441	20,057	26,02
Other					-	-	-	-	-	-	-	-
Total					26,555	31,135	39,160	58,820	62,875	86,032	107,426	161,80

YUGOSLAVIA

Table III.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF CANDIDATES, NEW ENTRANTS AND ENROLMENTS BY FIELD OF STUDY

Field of Study	Candidates				New entrants				Enrolments			
	1954-55	1959-60	1964-65	1969-70	1954-55	1959-60	1964-65	1969-70	1954-55	1959-60	1964-65	1969-7
Pure Science					-	-	-	-	-	-	-	-
Architecture					-	-	-	-	-	-	-	-
Technology					68	859	6,954	8,895	126	1,118	11,517	16,29
Agriculture					-	-	875	1,176	-	-	1,635	1,88
Total Science and Technology					68	859	7,829	10,071	126	1,118	13,152	18,17
Medical Sciences					124	170	884	1,386	219	619	1,459	2,79
Humanities					-	-	-	-	-	-	-	-
Education					3,383	5,623	12,068	14,511	6,671	9,667	19,867	30,08
Fine Arts					-	-	-	-	-	-	-	-
Law					-	-	-	-	-	-	-	-
Social Science					27	5,365	20,105	19,671	106	7,350	28,595	28,64
Other					-	-	-	-	-	-	-	-
Total					3,602	12,017	40,886	45,639	7,122	18,754	63,073	77,90

YUGOSLAVIA

Table IV

HIGHER EDUCATION:
NUMBER OF FEMALE STUDENTS BY FIELD OF STUDY

Field of Study	University		Non-university type higher education	
	1959-60	1970-71	1959-60	1970-71
Pure Science	1,972	6,388	-	-
Architecture	902	1,665	-	-
Technology	1,548	7,374	42	3,209
Agriculture	1,201	2,771	-	302
Total Science and Technology	5,623	18,198	42	3,511
Medical Sciences	3,931	8,968	530	2,375
Humanities	7,928	15,346	-	-
Education	76	800	4,551	13,867
Fine Arts	509	990	-	-
Law	3,475	9,770	-	-
Social Science	3,257	15,153	1,716	14,033
Other	-	-	-	-
Total	24,799	69,225	6,839	33,786

YUGOSLAVIA

Table V

HIGHER EDUCATION: FOREIGN STUDENTS IN THE COUNTRY AND NATIONALS STUDYING ABROAD BY FIELD OF STUDY

Field of Study	Foreign students		Nationals studying abroad	
	1961	1969	1961	1969
Pure Sciences	19	..	..	..
Technology	368	2,318	..	..
Medical Sciences	195	691	..	..
Other	283	..	..	..
TOTAL	865	3,502	..	..

YUGOSLAVIA

Table VI

GRADUATES

Year	Primary	Secondary General	Technical and Vocational					Teachers' Colleges	Non-university type higher education	University			
			Training high-level professional staff	Technical and other vocational schools	General Technical Education	Schools of Fine Arts	Total			Below 1st degree level	1st degree of studies	3rd cycle degree	Doctorate
1959-60	118,075	14,614	1,502	13,640	-	557	15,699	3,498	4,680	-	10,248	...	227
1960-61	156,147	14,635	1,512	17,215	-	564	19,291	4,170	5,815	-	11,828	...	232
1961-62	187,041	14,822	1,425	18,508	-	583	20,516	4,839	7,226	3,172	12,923	98	264
1962-63	208,738	14,449	1,197	19,830	-	613	21,640	4 323	7.727	4,673	13,713	144	269
1963-64	225,785	14,842	1,295	24,589	-	618	26,502	4,112	8,650	5,579	13,300	286	513
1964-65	237,352	21,934	1,148	30,116	-	657	31,921	4,064	9,278	5,664	13,010	361	1,284
1965-66	228,817	26,920	1,102	32,859	-	649	34,610	3,659	10,518	5,382	12,778	457	136
1966-67	237,824	30,710	1,012	32,434	-	683	34,129	4,147	12,128	4,286	12,770	450	132
1967-68	236,156	32,993	722	36,387	117	697	37,923	4,258	14,370	3,389	13,074	402	177
1968-69	241,941	35,216	835	38,405	153	728	40,121	3,869	16,046	2,185	13,025	460	194
1969-70	239,019	34,963	366	34,952	136	729	36,183	4,184	15,785	1,874	14,213	730	315
1970-71	240,550	35,029	331	34,071	158	748	35,308	3,757	15,683	1,664	14,432	666	371

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Table VI.a

UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY
(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Pure Science	920	698	702	707	626	598	604	729	854	863	1,077	1,133
Architecture	377	472	494	624	458	425	454	447	462	428	410	349
Technology	1,582	2,161	2,466	2,835	2,871	2,912	2,931	2,931	2,827	2,973	3,198	3,384
Agriculture	1,158	1,441	1,526	1,495	1,431	1,276	1,128	1,084	1,098	954	947	991
Total Science and Technology	4,037	4,772	5,188	5,661	5,386	5,211	5,117	5,191	5,241	5,218	5,632	5,857
Medical Sciences	1,649	1,695	1,725	2,049	1,763	1,808	1,983	1,934	1,963	1,754	1,957	2,076
Humanities	1,937	1,943	1,810	1,759	1,671	1,398	1,388	1,254	1,348	1,401	1,595	1,739
Education	43	97	90	101	152	247	221	195	277	309	363	340
Fine Arts	231	237	240	300	298	270	294	282	319	263	301	332
Law	1,298	1,393	1,902	1,841	1,750	1,522	1,395	1,446	1,424	1,558	1,562	1,542
Social Science	1,053	1,691	1,968	2,002	2,280	2,554	2,380	2,468	2,502	2,522	2,803	2,546
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total	10,248	11,828	12,923	13,713	13,300	13,010	12,778	12,770	13,074	13,025	14,213	14,432

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Table VI.b

NON-UNIVERSITY TYPE HIGHER EDUCATION: NUMBER OF GRADUATES BY FIELD OF STUDY
(1st degree of studies)

Field of Study	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-
Pure Science	-	-	-	-	-	-	-	-	-	-	-	-
Architecture	-	-	-	-	-	-	-	-	-	-	-	-
Technology	151	497	1,113	1,227	1,342	1,529	1,583	1,929	2,059	2,160	2,480	2,2
Agriculture	-	-	281	288	348	396	406	352	399	403	391	3
Total Science and Technology	151	497	1,394	1,515	1,690	1,925	1,989	2,281	2,458	2,563	2,871	2,5
Medical Sciences	424	233	195	241	341	339	422	406	559	559	764	7
Humanities	-	-	-	-	-	-	-	-	-	-	-	-
Education	2,425	2,658	2,489	2,553	2,912	3,432	4,250	5,419	6,749	7,871	7,770	8,7
Fine Arts	-	-	-	-	-	-	-	-	-	-	-	-
Law	-	-	-	-	-	-	-	-	-	-	-	-
Social Science	1,680	2,147	2,731	3,104	3,490	3,582	3,857	4,022	4,604	5,013	4,380	3,6
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total	4,680	5,535	6,809	7,413	8,433	9,278	10,518	12,128	14,370	16,046	15,785	15,6

YUGOSLAVIA

Table VII

TEACHERS AND PROFESSORS BY EDUCATIONAL LEVEL(1)

Level of Education	Full-time staff (2)		Part-time staff		Total	
	1959-60	1969-70	1959-60	1969-70	1959-60	1969-70
Primary	70,773	115,889	1,474	1,041	72,275	116,930
Secondary General	3,965	(9,389)(3)	670	(639)(3)	4,635	10,393(4)
Technical and Vocational	5,191	6,787	3,578	2,025	8,769	8,812(5)
Teachers' Colleges	1,455	1,230	255	69	1,710	1,299
Non-university type higher education	...	...	...	...	1,586	3,951
University	...	...	...	...	6,908	11,964

1) Teaching staff and teaching assistants.

2) Personnel working full-time on indefinite or fixed-term contract.

3) Distribution based on 10,028 professors.

4) Including 365 professors of the "School Centres".

5) Not including the professors of the "School Centres" (see footnote 1 on p. 220); the Yugoslav statistics give only a global figure for the teaching staff of these Centres (which did not exist in 1961-62), i.e. both for secondary technical education and the training of skilled workers. The distribution of students of the Centres by type of education is available only for the year 1968-69. To facilitate the calculation of the pupil/teacher ratio for this year, it should be noted that the numbe of professors in the schools of secondary technical education (other than that provided in the School Centres) was 9,048 in 1968-69 and the number of students, 131,700.

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Table VII.a

TEACHING STAFF IN UNIVERSITIES BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1960-1961 Senior level	1960-1961 Middle level (1)	1960-1961 Junior level (2)	1960-1961 Total	1969-1970 Senior level	1969-1970 Middle level (1)	1969-1970 Junior level (2)	1969-1970 Total
Pure Science	295		361	656	337		335	672
Architecture and Technology	887		1,527	2,414	1,963		2,186	4,149
Agriculture	536		563	1,099	770		619	1,389
Total Science and Technology	1,718		2,451	4,169	3,070		3,140	6,210
Medical Sciences	562		1,390	1,952	883		1,430	2,313
Humanities	352		626	978	718		547	1,265
Education	42		38	80	193		96	289
Fine Arts	304		89	393	383		100	483
Law	173		119	292	450		222	672
Social Science	195		155	350	453		279	732
Total	3,346		4,868	8,214	6,150		5,814	11,964

1) Teaching staff.

2) Teaching assistants.

YUGOSLAVIA

Table VII.b

TEACHING STAFF IN NON-UNIVERSITY TYPE HIGHER EDUCATION BY STATUS AND FIELD OF SPECIALISATION

Field of Specialisation	1960-1961				1969-1970			
	Senior level (1)	Middle level (1)	Junior level (2)	Total	Senior level (1)	Middle level (1)	Junior level (2)	Total
Pure Science	-		-	-	-		-	-
Architecture and Technology	210		79	289	894		271	1,165
Agriculture	75		5	80	185		18	203
Total Science and Technology	285		84	369	1,079		289	1,368
Medical Sciences	108		53	161	155		106	261
Humanities	-		-	-	-		-	-
Education	707		36	743	1,217		195	1,412
Fine Arts	-		-	-	-		-	-
Law	-		-	-	-		-	-
Social Science	676		191	867	802		108	910
Total	1,776		364	2,140	3 253		698	3,951

1) Teaching staff.

2) Teaching assistants.

YUGOSLAVIA

Table VII.c

TEACHING STAFF IN VOCATIONAL SCHOOLS BY FIELD OF SPECIALISATION(2)

Field of Specialisation	Full-time staff		Part-time staff		Total	
	1959-60	1970-71	1959-60	1970-71	1959-60	1970-71
Technical and other Vocational studies	4,703	5,483	2,555	1,749	7,258	7,232
Training high-level professional staff	119	24	619	10	738(1)	34
General Technical education	-	33	-	13	-	47
Fine Arts	778	942	404	256	1,182	1,198
Total	5,600	6,482	2,016	2,029	9,178	8,511

1) Of which 637 non-permanent teachers ("honorarni").

2) See footnote to Table VII concerning the teaching staff of the School Centres.

YUGOSLAVIA

Table VIII

EDUCATIONAL EXPENDITURE (1969-70) AT CURRENT PRICES

Millions in local currency

Type of expenditure	Primary	Secondary General	Technical and Vocational	Schools for skilled workers	Teachers' Colleges	All Higher Education	Other expenditures for education (1)	General expenditure	Tot exp
I. Central Government									
1. Current expenditure	3 238	323	940	270	123	892	105	66	5,
- Remuneration of teaching staff	2 627	261	617	181	97	607	64	-	4,
- other	611	62	323	89	26	285	41	66	1,
2. Investment									
3. Subsidies and transfers									
4. Total Central Government expenditure for education									
II. Local Authorities									
1. Current expenditure									
- of which: remuneration of teaching staff									
2. Investment									

1) Adult Education

Source : Statisticki Godisnjak Yugoslavije, 1971, p. 244.

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Table IX

DISTRIBUTION OF STUDENTS BY FATHER'S PROFESSION(1)

Father's profession(2)	University		Non-university type higher education	
	1959-60	1970-71	1959-60	1970-71
Agricultural, fishing and forestry workers		20,734		8,737
Industrial workers and craftsmen		23,385		7,465
Service workers		2,372		764
Transport workers		5,465		1,423
Protective service workers		10,659		1,963
Experts, artists, political and managerial personnel		30,460		4,253
Financial and related workers		21,894		3,844
Other professions		13,053		3,313
Not specified		8,628		1,800
Total		141,282		35,198

1) Full-time students of the FSR of Yugoslavia.

2) Country's definitions.

YUGOSLAVIA

Table X

DISTRIBUTION OF UNIVERSITY STUDENTS BY TOWN OF PARENTS' RESIDENCE

Towns of more than 100,000 inhabitants	Population Census 1960	Students 1960-61	Population Census 1970	Students 1970-71
Rest of the country				
Total				

YUGOSLAVIA

Table XI

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: -
NUMBER OF PERSONS WITH UNIVERSITY DIPLOMAS BY FIELD OF STUDY

Sector of economic activity Field study	1961				1970			
	Agriculture	Industry (1)	Other sectors	Total	Agriculture	Industry	Other Sectors	Total
Pure Science	24	603	4,789	5,416				
Architecture and Technology(2)	231	11,495	7,552	19,278				
Agriculture	3,904	1,306	3,788	8,998				
Total science and Technology	4,159	13,404	16,129	33,692				
Medical Sciences	2,232	519	19,832	22,583				
Humanities and Fine Arts	43	524	15,968	16,535				
Education	104	1,071	11,699	12,774				
Law	223	1,527	16,800	18,550				
Social Science(3)	178	2,379	6,192	8,749				
Total	6,939	19,324	86,620	112,883				

1) Industry: mining, manufacturing, construction and electricity.
2) Engineering.
3) Commerce and Social Sciences.

Source: Statistics of the Occupational and Educational Structure of the Labour Force in 53 Countries. OECD, Paris, 1969, p.118.

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Table XI.a

EDUCATION BY SECTOR OF ECONOMIC ACTIVITY: NUMBER OF PERSONS WITH NON-UNIVERSITY TYPE HIGHER EDUCATION DIPLOMAS BY FIELD OF STUDY

Sector of economic activity / Field of Study	1961				1970			
	Agriculture	Industry	Other Sectors	Total	Agriculture	Industry	Other Sectors	Total
Pure Science								
Architecture and Technology								
Agriculture								
Total Science and Technology								
Medical Sciences								
Humanities and Fine Arts								
Education								
Law								
Social Science								
Total	815	6,750	53,474	61,039				

YUGOSLAVIA Table XII

PRE-PRIMARY EDUCATION

	1959-60	1969-70
I. Enrolments	69,915	123,215
II. Teachers		
III. Expenditure		
a) Central Government		
- Teachers		
- Subsidies to local authorities		
- Other		
b) Local authorities		
- Teachers		
- Other		

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Table XIII

SCHOOLS FOR SKILLED WORKERS

(Škole za kvalifikovane radnike)

	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
I. Enrolments	131,384	139,305	140,353	138,713	153,128	182,452	199,301	216,979	234,044	258,114	276,123	286,008
- female	24,277	26,242	25,745	24,669	28,845	37,380	41,480	47,332	57,059	69,053	78,086	83,291
- new entrants	44,573	46,063	47,528	46,057	61,011	76,386	68,167	86,359	96,780	110,236	108,948	109,610
II. Teaching staff(1)	9,591	9,646	6,697	5,462	5,499	5,886	5,353	5,555	5,705	5,586	5,944	5,826
- full-time(2)	...	5,837	3,960	3,314	3,481	3,697	3,864	4,120	4,363	4,744	4,792	4,763
- part-time	...	3,809	2,737	2,148	2,018	2,189	1,489	1,435	1,342	892	1,152	1,063
- permanent(3)	5,240	5,403	3,695	3,314	3,481	...	...	...	...	...	...	...
- non-permanent(4)	4,351	4,243	3,002	2,148	2,018	...	...	...	...	...	...	...
III. Graduates(5)	35,003	41,072	40,007	37,784	40,290	40,815	57,298	59,273	55,922	64,480	72,135	76,297

1) Teaching staff and teaching assistants.
2) Personnel working full-time on indefinite or fixed-term contract.
3) Established staff ("salni").
4) Honorary staff ("honorarni").
5) Certificate of "skilled worker".

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Table XIII.a

SCHOOLS FOR COMPLEMENTARY EDUCATION

(Škole za dopunsko obrazovanje)

	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-
I. Enrolments	19,767	20,375	20,696	20,818	22,176	22,980	22,950	23,869	24,857	27,265	28,043	30,2
- female	11,957	12,101	11,983	11,955	12,361	12,722	12,828	13,317	13,761	15,142	15,924	17,3
- new entrants	...	...	...	...	...	...	...	...	...	...	...	...
II. Teaching Staff(1)	1,419	1,434	1,372	1,455	1,537	1,377	1,339	1,147	1,194	1,273	1,380	1,4
- full-time(2)	...	985	923	976	1,092	971	1,054	930	979	1,007	1,126	1,1
- part-time	...	449	449	480	445	406	285	217	215	266	254	2
- permanent(3)	769	833	790	976	1,092	...	...	...	...	...	...	...
- non-permanent(4)	650	601	582	480	445	...	...	...	...	...	...	...
III. Graduates(5)	1,082	1,118	767	981	1,061	1,008	1,232	1,489	1,433	1,417	1,656	1,4

1) Teaching staff and teaching assistants.
2) Personnel working full-time on indefinite or fixed-term contract.
3) Established staff ("stalni").
4) Honorary staff ("honorarni").
5) Having finished their studies.

SOURCES

Replies of the Yugoslav authorities.

Statisticki Bilten, statistical bulletins published by the Federal Institute of Statistics.

Statistical Yearbook of the Federal Republic of Yugoslavia (1968, 1969, 1970 and 1971).

Development of Higher Education 1950-67, Statistical Survey, OECD, 1970.

PROFESSIONAL GROUPS(1)

I. Major Group 0: Professional, Technical and Related Workers;
Minor Group 6.0: Deck Officers, Engineer Officers and Pilots of Ships;
Minor Group 6.2: Aircraft Pilots, Navigators and Flight Engineers.

II. Major Group 1: Administrative, Executive and Managerial Workers. If possible the Minor Group 1.0 should be distinguished: Administrative, Executive and Managerial Workers, Government.

III. Major Group 2: Clerical Workers;
Major Group 3: Sales Workers. If possible this should distinguish Minor Group 3.0: Working Proprietors in wholesale and retail trade.

IV. Major Group 4: Farmers, Fishermen, Hunters, Loggers and related workers;
Minor Group 4.0: Working Proprietors, Farmers and Farm Managers should be distinguished from farm workers and other persons.

V. Major Group 5: Mines, Quarrymen and related workers
Major Group 6: Workers in Transport and Communications occupations (except Minor Groups 6.0 and 6.2 which are included in 1);
Major Group 7/8: Craftsmen, Production Process Workers and Labourers not elsewhere classified. Persons in this category should be classified as skilled, semi-skilled or unskilled.

VI. Major Group 9: Service, Sport and Recreation Workers.

VII. Major Group X: Workers not classifiable by occupation.

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1) Corresponding to Major and Minor Groups of the International Standard Classification of Occupation. See *Methods and Statistical Needs for Educational Planning*, OECD, Paris 1967, p. 118.

INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES (ISIC)

Division	Relevant Breakdowns
0.	Agriculture, etc.
1.	Mining and quarrying
2 -3.	Manufacturing
	(31-32 - Chemicals)
	31 - Manufacture of chemicals and chemical products
	32 - Manufacture of products of petroleum and coal
	(34-38 - Metal products)
	34 - Basic metal industries
	35 - Manufacture of metal products, except machinery and transport equipment
	36 - Manufacture of machinery, except electrical machinery
	37 - Manufacture of electrical machinery, apparatus, appliances and supplies
	38 - Manufacture of transport equipment
	(Manufacturing n.e.c.)
4.	Construction
5.	Electricity, gas, water and sanitary services
6.	Commerce
7.	Transport, storage and communication
8.	Services
	81 - Government services
	(811 - Defence)
	(812 - Public administration)
	82 - Community services
	(821 - Educational services)
	(822 - Medical and other health services)
	(823 - Research and scientific institutes)
	83 - Business services
	84 - Recreation services
	85 - Personal services
	(89 - Other services)
9.	Activities not adequately described

Appendix II

ENROLMENT FORECASTS FOR 1980

I. GREECE

NOTES ON THE TABLES

Table A

The estimates in this Table are based on the following considerations:

Eight-year basic studies: The figure for 1979-80 represents full attendance of the corresponding age group. Estimates are based on population projections (see Table E).

Secondary education: The rate of increase in enrolments in upper secondary education is expected to be lower than that of the last decade (4.5 per cent per year as against 6.5 per cent); this rate, nevertheless, can yield an enrolment rate for the 14-17 year age group of 70 per cent which, at present, is among the highest in Europe. A higher rate is not expected to be attained for the following main reasons:

a) The number of those who complete the first eight years of studies will now be increasing at a very low rate. Greece has already attained full attendance for the first six years of studies (6-11 year age group); for the next two years (12-13 year age group) full attendance can be achieved by 1980 with an average annual increase in enrolments of 2.9 per cent(1). Thus the

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1) As shown in Table A, a decline in the rate of increase in enrolments in the first two classes of secondary general education (corresponding age group 12-13 year old children) has already taken place during the last four years (1.5 per cent per year as against 4.1 per cent for the whole nine-year period 1960-1969).

pressure on upper secondary education will not be as strong as in the past.

b) On the supply side, the Greek educational authorities, after the rapid increase in enrolments during the sixties, face serious problems of capacity inadequacies and of raising the qualitative standards of the educational services. Entrance examinations will serve as a check to a potentially large increase in the proportion of students continuing their studies at the upper secondary general level. In technical and vocational education enrolments are expected to continue increasing at a faster rate; entry to these schools is much easier. Moreover, the investments made in technical schools and the effort to reorganise technical education over the 1960s (e.g. the establishment and operation of SELETE, the school for training professors for technical schools) are expected to produce full results over the next decade.

c) Agriculture will continue to represent a large proportion of the total population of Greece in spite of important shifts of rural manpower to other sectors expected to take place over the decade. The high degree of dispersion of the population in small rural villages, the relatively low agricultural incomes, the large size of the agricultural family, and other social and economic factors make for a lower participation of the rural population at upper educational levels.

Non-university level higher education is expected to continue developing at high rates (13 per cent per year). It is a new branch of higher education (representing 0.6 per cent of total enrolments in 1969 as against 0.2 per cent in 1959). The Greek government has decided to establish five higher technical education centres in the five largest towns of Greece with a total capacity of 12,000 students. The project which is now at the implementation stage is being financed by the World Bank. The demand for this type of education is very strong; by 1968 the proportion of candidates for technology admitted to the existing public institutions was 39 per cent. Private institutions are also developing very quickly in this field.

The rapid increase in enrolments in universities over the 1960s and, accordingly, the delay in expanding their capacity have created problems of maintaining the quality standards of educational services at this level. The Greek authorities have been obliged for three consecutive years now to keep the number of new entrants at a level of some 13,000 students per year through strict entrance examinations. This explains to some extent the lower annual average rate of increase in enrolments expected for the next decade (3.6 per cent as against 8.0 per cent during 1964-1969), but also the lower expansion of secondary general education described as above.

Table B

For the evolution of enrolments in the universities over the decade 1969-1979, the following assumptions were made:

- The proportion of gymnasium graduates in total enrolments, in upper secondary general education, in 1969, already represented a satisfactory level, and it is not expected to show any significant change over the decade.
- It is also assumed that the proportion of gymnasium graduates entering universities in 1969 will remain about the same in 1979. Under present conditions this seems to lead to conservative estimates; but, the pressure on the universities is expected to be reduced in the future by the rapid development of non-university level higher education.
- The actual ratio of total drop-outs and graduates to enrolments (15.5 per cent) is assumed to remain the same over the period 1969-1979.

Application of the above rates yields the following estimates for 1979:

- Enrolments in upper secondary general education	(1968-69):	238,900	(1978-79):	355,000
- Number of gymnasium graduates	(1969):	35,420	(1979):	56,400
- Ratio of graduates to enrolments (in per cent)	(1969):	15.9	(1979):	15.9

- New entrants to universities (1969-70): 12,400 (1979-80): 19,740
- Ratio of new entrants in universities to gymnasium graduates (in per cent) (1969): 35 (1979): 35

Table C

The breakdown by age group of the enrolments forecast for 1979-80 (Table A) was made on the following assumptions:

- For the *eight-year basic studies*, the 1969 proportion of pupils beyond normal age in total enrolments was applied for 1979-80; it already represents a reasonable level, taking into account the structure of population (a large proportion is agricultural) and its high degree of dispersion in small distant villages. The same applies to *upper secondary general education* where only a slight reduction in this proportion is foreseen.
- The proportion of younger students in *technical and vocational education* is expected to be higher in the future following the expansion of the educational facilities and the general improvement of income levels.

Table D

This table is a synthesis of data on *primary* and *secondary education* in Tables A and C.

GREECE

Table A

ENROLMENT FORECASTS (Year 1980)(1)

Level of Education	Enrolments (in thousands)				Average annual rate of increase		
	1960/61	1964/65	1969/70	1979/80	1960/1969	1964/1969	1969/1979
I. First eight years of studies	1,050.3	1,150.0	1,145.0	1,175.0	1.0	- 0.1	0.3
Primary	912.3	965.8	948.1		0.4	- 0.4	
Secondary general, first two years	125.0	171.5	185.4		4.5	1.6	
Technical and Vocational (13 years old and less)	13.0	12.7	11.5		- 1.4	- 2,0	
Upper secondary	185.4	243.1	333.4	520.0	7.4	6.5	4.5
General	149.5	187.8	252.1	370.0	6.0	6.0	4.0
Technical and Vocational (14 years old and over)	35.9	55.3	81.3	150.0	9.5	8.0	6.3
III. Non-university level higher education	2.8	5.0	11.7	40.0	17.6	18.0	13.1
IV. University	25.5	49.3	72.4	103.6	12.3	8.0	3.6

1) Enrolments in teachers' colleges are not included in the tables of this Appendix.

GREECE

Table B

ENROLMENT FORECASTS FOR UNIVERSITY LEVEL HIGHER EDUCATION (1980)

Year	Enrolments (a) (b+c)-(d+e)	Enrolments previous year (b)	New Entrants (c)		Drop-outs (d)		Graduates previous year	
			Students	Per cent of (b)	Students	Per cent of (b)	Students	Per cent of (b)
1959-60	24,478		6,081					
1960-61	25,549	24,478	7,112	29.0	2,154	8.8	3,887	15.9
1961-62	27,927	25,549	6,840	26.8	605	2.4	3,857	15.1
1962-63	31,811	27,927	9,613	34.4	1,665	6.0	4,064	14.6
1963-64	39,584	31,811	11,476	36.1	- 548	- 1.7	4,251	13.4
1964-65	49,262	39,584	20,749	52.4	6,760	17.1	4,311	10.9
1965-66	53,980	49,262	13,441	27.3	4,193	8.5	4,530	9.2
1966-67	60,383	53,980	...	...	...	...	4,577	8.5
1967-68	67,971	60,383	...	...	...	...	4,951	8.2
1968-69	70,981	67,971	13,009	19.1	3,887	5.7	6,112	9.0
1969-70	72,362	70,981	12,397	17.5	3,308	4.7	7,708	10.9
1979-80 (Forecasts)	103,620	99,270	19,740	19.1		15,390		

GREECE

Table C

PRIMARY AND SECONDARY EDUCATION
STRUCTURE OF ENROLMENTS BY AGE-GROUP

Level of Education	1968-69 Enrolments (Thousands)	1968-69 %	1979-80 Enrolments (Thousands)	1979-80 %
I. Primary education	948.1			
5 years old	38.8			
6 to 11	848.4			
over 11	60.9			
II. Lower secondary	185.4			
11 years old	1.5			
12-13	155.8			
14 and over	28.1			
III. Technical and vocational (11-13 years)	11.5			
IV. Total eight-year basic studies	1,145.0	100.0	1,175.0	100.0
5 years old	38.8	3.4	50.0	4.3
6-13	1,078.1	94.2	1,095.0	93.3
14 and over	28.1	2.4	30.0	2.4
V. Technical and vocational	81.3	100.0	150.0	100.0
14-17 years	37.0	45.2	80.0	53.3
18 and over	44.3	54.8	70.0	46.7
VI. Upper secondary	151.1	100.0	370.0	100.0
13 years old			40.0	10.8
14-17 years	277.8		285.0	77.0
18 and over	33.3	12.9	45.0	12.2

GREECE

Table D

PRIMARY AND SECONDARY EDUCATION
ENROLMENT RATIO FORECASTS FOR THE YEAR 1980

Thousands

Age group / Level of Education	5	6-13	14-17	18+	Total
Eight-year basic studies	50	1,095	30	-	1,175
Secondary general	-	40	285	45	370
Technical and vocational (sec. level)	-		80	70	150
Higher	-	-	5	..	..
Total	50	1,135	400	..	..
Population 1980	..	1,135	570	..	..
Enrolment ratio 1980	..	100	70	..	..
Enrolment ratio 1969	..	91	49	..	..

GREECE

Table E

FORECASTS OF POPULATION AT SCHOOL AGE

Thousands

Age	1.1.1970	1980
5	145.0	138.3
6	147.8	139.2
7	140.1	140.3
8	145.0	140.7
9	142.7	141.1
10	153.7	142.9
11	144.8	143.8
12	141.4	144.2
13	144.8	143.4
6-13	1,160.3	1,135.6
14	144.1	142.9
15	146.7	145.2
16	141.9	137.4
17	134.1	141.9
14-17	566.8	567.4
18	139.0	139.5
19	140.4	150.1
20	139.1	140.9
21	126.5	137.2
22	136.8	140.3
18-22	681.8	708.0

Source: G. Siampos: Demographic Trends in Greece, Ministry of Co-ordination, Athens, 1969.

II. PORTUGAL

NOTES ON THE TABLES

Table A

For the first eight years of schooling (primary education and "ciclo preparatorio"), the acceleration of the process for the realisation of an eight-year compulsory education is an expressed policy of the Portuguese government. Since Portugal is very near to reaching full attendance in the first six years of studies, an intensive effort will be required at the level of the last two years of the "ciclo preparatorio". The dramatic population decrease (especially in the 5 to 14 year age group) expected to occur during the decade due to rapid emigration (see Table E) will certainly make for reduced demand pressure at this level.

In secondary and higher education, enrolments are assumed to continue increasing over the decade 1970-1980 at the same average annual rates realised over the last five-year period. The maintenance of these rates is a feasible development for the following main reasons:

a) The enrolment ratio in upper secondary education is actually low in Portugal (22 per cent for the 15 to 18 year age group) and, therefore, the margins for a growing participation at this level are still very large in spite of the population decrease foreseen for the decade.

b) The Portuguese economy is expected to realise a higher growth rate during 1970-1980 (7 per cent per year as against 5.4 per cent over 1955-1968).(1) The experience of the 1960s in the developing Member countries proves that such favourable developments are likely to generate a strong private demand for educational services at

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1) The Growth of Output 1960-1980, OECD, 1970.

higher levels (because of higher family incomes and higher salaries for qualified manpower).

c) The gradual extension of compulsory education to cover the first eight years of studies will necessarily create a higher demand for education at upper levels.

Table D indicates that a 5.5 per cent increase in enrolments in secondary general education is not enough to sustain a growth rate for university enrolments of 8.8 per cent per year over the decade 1970-1980 (Table A) if the ratio of secondary general education graduates to total enrolments and that of new entrants in universities to secondary education graduates remain the same. However, the number of candidates for entry to universities is expected to increase over the decade: an objective of the Portuguese reform is to raise the standards of upper secondary technical education, thus giving the same formal opportunities to the graduates of these schools to continue higher education studies.

Table B

The data for 1969-1970 were taken from Table I of Appendix I (Portugal).

A higher proportion of pupils beyond normal age is, to some extent, explained by the changes provided by the reform as to the age of entry to the primary school (6 as against 7 in the past).

Table C

This table is a synthesis of data on primary and secondary education presented in Tables A and B.

PORTUGAL

Table A

ENROLMENT FORECASTS (YEAR 1980)(1)

Level of Education	Enrolments (in thousands)				Average annual rate of growth		
	1960/61	1964/65	1969/70	1979/80 Forecasts	1960/69	1964/69	1969/79
I. First eight years of schooling			1,162.2	1,245.0			0.9
II. Upper Secondary	129.5	179.5	225.0	355.0	6.3	4.6	4.6
- General	(72.6)	(96.8)	(126.9)	(215.0)	(6.4)	(5.5)	(5.5)
- Vocational and Technical	(56.9)	(82.7)	(98.1)	(140.0)	(6.2)	(3.5)	(3.5)
III. Non-University level higher education	5.0	7.6	11.6	27.0	9.8	8.8	8.8
IV. University	19.8	25.6	39.3	90.0	7.1	8.9	8.9

1) Enrolments in teachers' colleges are not included.

PORTUGAL

Table B

PRIMARY AND SECONDARY EDUCATION
STRUCTURE OF ENROLMENTS BY AGE-GROUP

Level of Education	1969-1970	
	Enrolments (Thousands)	%
Primary	989.7	
6 years old	39.1	
7 - 14	936.6	
15 and over	20.0	
"ciclo preparatorio"	138.6	
10 - 14	127.3	
15 - 18	6.7	
19 and over	4.6	
Vocational and Technical		
10 - 14	33.9	
I. Total first eight years of schooling	1,162.2	100.0
6 years old	39.1	
7 - 14	1,091.8	
15 and over	31.3	2.7
II. Upper Secondary	225.0	100.0
14 and under	42.9	
15 - 18	122.3	
19 and over	59.8	26.6
III. Higher(1) (18 and under)	6.3	

1) Including teachers' colleges.

PORTUGAL Table C

PRIMARY AND SECONDARY EDUCATION
ENROLMENT RATIO FORECASTS FOR THE YEAR 1980

Thousands

Age group (1) Level of Education	6-13	14-17	18 +	Total
First eight years of schooling	1,160	85		1,245
Upper Secondary Education		260	100	355
Higher Education(2)		5	...	...
Total	1,160	350	...	...
Population 1980(3)	1,160	615	...	...
Enrolment ratios 1980	100	57		
Enrolment ratios 1969 (4)	(84)	(22)		

1) The Portuguese reform calls for primary school enrolments to include all children having reached 6 years of age by 31st October of the school year.

2) Including teachers' colleges.

3) Estimates based on the results of an OECD enquiry on demographic trends.

4) Refers to the 7-14 and 15-18 year age groups, respectively.

PORTUGAL

Table D

UNIVERSITY LEVEL HIGHER EDUCATION
ENROLMENT FORECASTS (1970-1980)

Thousands

Year	Enrolments (b+c)-(d) (a)	Enrolments Previous Year (b)	New Entrants(1) (c)	Drop-outs and Graduates Previous Year(2) (d)
1969-70	39.3	36.9	8.6	6.2
1970-71	41.8	39.3	9.1	6.6
1971-72	44.4	41.8	9.6	7.0
1972-73	47.0	44.4	10.1	7.5
1973-74	49.8	47.0	10.7	7.9
1974-75	52.7	49.8	11.3	8.4
1975-76	55.7	52.7	11.9	8.9
1976-77	58.9	55.7	12.6	9.4
1977-78	62.3	58.9	13.3	9.9
1978-79	65.8	62.3	14.0	10.5
1979-80	69.6	65.8	14.8	11.0

1) New entrants would increase at the same rate as that foreseen for the enrolments in secondary general education (5.5 per cent per year) if the following actual ratios remain the same:

- that of secondary education graduates to enrolments in secondary education;
- that of new entrants in universities to the number of secondary general education graduates.

2) The actual proportion of the total number of drop-outs and graduates to enrolments (16.8 per cent) is assumed to remain the same over the period 1970-1980.

PORTUGAL

Table E

TOTAL POPULATION PROJECTIONS
(INCLUDING MIGRATION)

Thousands

Age Group	1-1-1971	1-1-1981
0 - 4	850.7	701.7
5 - 9	883.5	708.0
10 - 14	788.1	742.4
15 - 19	763.4	783.5
20 - 24	731.2	664.9
25+	4,884.0	4,742.2
Total	8,900.9	8,342.7

Source : Results of an OECD enquiry on demographic trends.

III. SPAIN

NOTES ON THE TABLES

Table A

The Spanish government has set as a target to attain by 1980 full attendance of the 6 to 13 year age group, which corresponds to the first eight-year period of studies.(1) The enrolment ratio for this group was 96 per cent in 1970. Most of the effort will be required at the level of the last two years of the basic school. (The enrolment ratio of the 12 to 13 year age group was 85 per cent in 1970.)

For the 14 to 17 year age group (corresponding to secondary education), the Spanish authorities foresee an enrolment ratio of 60 per cent for the year 1980(1) (as against 32 per cent in 1970). This target can be achieved if education at this level continues to expand at the same fast rate as during the last decade. The largest part of the increase in enrolments at this level is expected to be absorbed by the uniform, multi-purpose "Bachillerato", with which the various other types of secondary education at present will be gradually merged.

Forecasts for enrolments in higher education were also made on the same basis (maintenance for the period 1970-1980 of the high rates of increase in enrolments over the last decade).

Table B

The breakdown by age group of the enrolments foreseen for the year 1979-1980 was made on the assumption that the proportion of pupils beyond normal age in total enrolments remains the same in the basic school (eight-year basic general education). A reduction of this proportion is expected in secondary education.

Table C

This table is a synthesis of the data on primary and secondary education presented in Tables A and B.

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1) Reply of the Spanish authorities to the OECD Educational Growth Enquiry (1970).

SPAIN

Table A

ENROLMENT FORECASTS (Year 1980)

Level of Education	Enrolments (in thousands)			Average annual rate of growth	
	1960-61	1969-70	1979-80	1960-1969	1969-1979
I. Eight-year basic education		4,956.2	5,390.0		0.9
II. Upper secondary	222.1	471.2	1,100.0	8.8	8.8
General	79.4	250.1	740.0	13.6	11.5
Vocational and Technical (14 years and over)	142.7	221.1	360.0	5.0	5.0
III. Non-university level higher education	44.8	82.6	160.0	7.0	7.0
IV. University	77.1	192.1	530.0	10.7	10.7

SPAIN Table B

PRIMARY AND SECONDARY EDUCATION
STRUCTURE OF ENROLMENTS, BY AGE-GROUP

Level of Education	1969-1970 Enrolments (thousands)	1969-1970 %	1979-1980 Enrolments (thousands)	1979-1980 %
I. Primary	3,789.2			
4 - 8 years				
6 - 13	3,731.2			
14 years	58.0			
II. Secondary General (lower) "Grado Elemental"	1,121.0			
10 - 13 years	824.0			
14 - 16	297.0			
III. Technical and Vocational	46.0			
10 - 13 years				
IV. Eight-year Basic Education (I-III)	4,956.2	100.0	5,390.0	100.0
6 - 13 years	(4,601.2)	92.8	5,000.0	92.8
14 - 16	(355.0)	7.2	390.0	7.2
V. Secondary General	250.0	100.0	740.0	100.0
14 - 17 years	188.7	75.5	630.0	85.0
18 and over	61.4	24.5	110.0	15.0
VI. Secondary Technical and Vocational	221.1	100.0	360.0	100.0
14 - 17 years	143.0	64.7	270.0	75.0
18 and over	78.1	35.3	90.0	25.0
VII. Higher(1)	24.4		75.0	
16 - 17 years				

1) Including teachers' colleges.

SPAIN

Table C

PRIMARY AND SECONDARY EDUCATION
ENROLMENT RATIO FORECASTS FOR THE YEAR 1980

Thousands

Age Group / Level of Education	6-13	14-17	18+	Total
Eight-Year Basic Education	5,000	390	-	5,390
Upper Secondary General	-	630	110	740
Upper Technical and Vocational	-	270	90	360
Higher (1)	-	75	...	...
Total	5,000	1,365	...	...
Population : 1980	5,000	2,360	...	...
Enrolment ratio 1980	100	58	...	...
Enrolment ratio 1970	96	32		

1) Including teachers' colleges.

SPAIN

Table D

FORECASTS OF POPULATION OF SCHOOL AGE

Thousands

Age	1970(1)	1980(2)
6	595.1	647.0
7	589.0	640.3
8	583.0	633.9
9	582.4	627.8
10	594.0	621.7
11	599.5	615.7
12	601.2	609.9
13	594.6	604.1
6 - 13	4,738.8	5,000.4
14	558.4	598.2
15	548.2	592.4
16	527.7	586.5
17	536.2	580.5
14 - 17	2,170.5	2,357.6
18	537.0	574.4
19	508.1	573.3
20	502.0	584.1
21	530.4	588.7
22	564.2	589.4
18 - 22	2,641.7	2,909.9

Sources : 1) *Datos y Cifras de la Enseñanza en España*, 1970, tomo 1.

2) Reply of the Spanish authorities to the OECD Educational Growth Enquiry (1970).

IV. TURKEY

NOTES ON THE TABLES

Table A

The realisation of an *eight-year compulsory education* in Turkey is not expected to be attained by the year 1980.(1) The number of enrolments in the first five years of studies (primary education) is by now approaching the population of the corresponding age group; but for the subsequent three years, the enrolment ratios are rather low (32 per cent). Moreover, this country has to face a very rapid rate of population growth.(2) Thus, as a first step, within the period 1969-1979, the realisation is envisaged of full attendance during the first six years of studies and a substantial improvement of the *enrolment ratios* for the two subsequent years.

The Turkish authorities are planning an acceleration of the rate of increase in enrolments in *upper secondary technical* and *vocational education* to meet development requirements (11.9 per cent per year for the period 1969-1979 as against 10.3 per cent per year over the period 1960-1969).

A high growth rate is also foreseen for enrolments in *upper secondary general education* (8.1 per cent per year) but still lower than that manifested during the last decade (12.1 per cent per year). This expansion of upper secondary education yields an increase in enrolments of 7.7 per cent and 5.6 per cent per year, respectively, for *non-university level higher education* and *university education* on the assumption that the following transition coefficients remain the same over the period 1970-1980:

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1) Reply of the Turkish authorities to the OECD Educational Growth Enquiry (1970).

2) The population in the 7-12 age group is expected to rise from 5.5 million in 1968 to 7.3 million in 1980 (an average rate of increase of 2.85 per cent per year).

a) The ratio of graduates to total enrolments in secondary general education.

b) The ratio of total drop-outs and graduates of higher education institutions to total enrolments.
The ratio of new entrants in higher education to secondary general education graduates, which at present seems to be rather high, is assumed here to be slightly reduced; upper secondary education is now becoming more accessible to larger population groups (especially in the rural areas).

Table B

More specifically, the estimates for university enrolments were made on the following assumptions (in thousands):

- Enrolments in Secondary General(1)	(1969-70):	217.3	(1978-79):	435.0
- Per cent of graduates to enrolments	:	19.5		19.5
- Secondary General graduates(1)	(1970) :	42.3	(1979) :	84.8
- Ratio of new entrants in univerisities to Secondary General graduates (in %)	:	41.6		39.0
- New entrants to universities	(1970) :	17.6	(1979) :	33.0
- Ratio of university drop-outs and graduates to total enrolments (in %)	:	16		16

Table C

The estimates for enrolments in non-university level higher education were made on the following assumptions (in thousands):

- Enrolments in Secondary General	(1969-70):	217.3	(1978-79):	435.0
- Ratio of graduates to enrolments (in %)	:	19.5		19.5
- Secondary General graduates	(1970) :	42.3	(1979) :	84.8
- Ratio of new entrants in non-university level higher education to Secondary General graduates (in %)	:	47		43

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1) Including the religious high schools.

- New entrants to non-university level higher education (1970) : 20.0 (1979) : 36.6
- Ratio of non-university level higher education drop-outs and graduates to total enrolments (in %) : 25 25

TURKEY

Table A

ENROLMENT FORECASTS (YEAR 1980)

Level of Education (1)	Enrolments (in thousands)			Average annual rate of growth	
	1960-61	1969-70	1979-80	1960-1969	1969-1979
I. First eight years of studies	3,198.9	5,666.4	9,100.0	6.6	4.8
1. Primary education	2,866.5	4,892.6			
2. Secondary general, 1st level	291.3	711.0			
3. Technical and vocational, 1st level	37.7	24.3			
4. Theology schools, 1st level	3.4	38.5			
II. Secondary General, Upper Level	76.7	217.3	475.0	12.3	8.1
III. Technical and Vocational, 2nd level	41.5	100.3	310.0	10.3	11.9
IV. Higher Education	60.6	147.0	275.0	10.3	6.5
1. Non-University Level Higher Education	18.6	(61.5)(2)	120.0	12.7	(7.7)(3)
2. University	42.0	(95.4)(2)	155.0	8.6	(5.6)(3)

1) Enrolments in teachers' colleges are not included.

2) Year 1970-71.

3) Period 1970-1979.

TURKEY

Table B

UNIVERSITY LEVEL HIGHER EDUCATION ENROLMENT FORECASTS (1971-1980)

Thousands

Year	Enrolments (b+c)-(d) (a)	Enrolments Previous Year (b)	New Entrants (c)	Drop-outs and Graduates Previous Year (d)
1970-71	95.4		17.6	
1971-72	99.0	95.4	18.9	15.3
1972-73	103.5	99.0	20.3	15.8
1973-74	108.7	103.5	21.8	16.6
1974-75	114.7	108.7	23.4	17.4
1975-76	121.4	114.7	25.1	18.4
1976-77	128.9	121.4	26.9	19.4
1977-78	137.2	128.9	28.9	20.6
1978-79	146.2	137.2	31.0	22.0
1979-80	156.0	146.2	33.0	23.2

TURKEY

Table C

NON-UNIVERSITY LEVEL HIGHER EDUCATION ENROLMENT FORECASTS (1971-1980)

Thousands

Year	Enrolments (b+c)-(d) (a)	Enrolments Previous Year (b)	New Entrants (c)	Drop-outs and Graduates previous year (d)
1970-71	61.5		20.0	
1971-72	67.4	61.5	21.2	15.3
1972-73	73.2	67.4	22.7	16.9
1973-74	79.2	73.2	24.3	18.3
1974-75	85.4	79.2	26.0	19.8
1975-76	91.8	85.4	27.8	21.4
1976-77	98.5	91.8	29.7	23.0
1977-78	105.7	98.5	31.8	24.6
1978-79	113.4	105.7	34.1	26.4
1979-80	121.6	113.4	36.6	28.4

TURKEY

Table D

FORECASTS OF POPULATION AT SCHOOL AGE

Thousands

Age	1969	1980
5		
6		
7		
8		
9		
10		
11		
12		
7 - 12	5 456	7 322
13		
14		
15		
13 - 15	2 327	3 102
16		
17		
18		
16 - 18	1 909	2 543
19		
20		
21		
22		
16 - 22	1 999	2 665

V. YUGOSLAVIA

NOTES ON THE TABLES

Table A

The Yugoslav authorities expect to approach full school attendance for the 7 to 14 year age group by the year 1975.(1) (By 1971 the enrolment ratio for this age group was 94 per cent.) Estimates for enrolments in the *eight-year primary education* for 1980 were based on demographic projections (Table F).

Another objective of the Yugoslav plan is to ensure that "about 70 per cent of children of school age will receive different forms of *secondary education*" over the period 1970-1985.(1) Table A indicates that this target can be attained by 1980 if enrolments in secondary education increase over the decade 1970-1980 at a rate much lower than that realised during the 1960s (4.2 per cent per year as against 7.8 per cent).

Estimates for enrolments in *non-university level higher education* and in the *universities* for the year 1980 were based on the evolution of enrolments in secondary education and on the assumption that the present transition coefficients will remain the same over the decade 1970-1980 (Tables D and E).

Table B

The breakdown by age group of the enrolments foreseen for 1980 was made on the assumption that the present proportion of pupils beyond normal age in total enrolments will remain the same over the decade 1970-1980.

Table C

This table is a synthesis of data on primary and secondary education presented in Tables A and B.

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1) Reply of the Yugoslav authorities to [illegible] OECD Educational Growth Enquiry (1970).

Table D

The estimates for enrolments in non-university level higher education were made on the assumption that the following ratios (Table D) remain the same over the decade:

a) The ratio of secondary education graduates to total enrolments in secondary education;
b) The ratio of new entrants in non-university level higher education to secondary education graduates;
c) The ratio of the total number of drop-outs and graduates in non-university level higher education to total enrolments.

Application of the above rates yields the following estimates for 1980:

	Students in thousands			
- Enrolments in Secondary Education	(1969-70):	658.3	(1979-80):	960.0
- Secondary Education Graduates	(1969-70):	143.3	(1979-80):	210.0
- Ratio of Secondary Education Graduates to total enrolments (in %)	(1970) :	21.8	(1980) :	21.8
- New entrants to non-university level Higher Education	(1970-71):	45.6	(1980-81):	66.8
- Ratio of new entrants in non-university Higher Education to Secondary Education Graduates (in %)	(1970) :	31.8	(1980) :	31.8
- Ratio of non-university drop-outs and Graduates to total enrolments (in %)	(1970) :	54.5	(1970-1980):	54.5

Table E

The estimates for enrolments in universities were made on similar assumptions to those for the enrolments in non-university level higher education (application of the present transition coefficients over the next ten-year period):

Students in thousands

- Enrolments in Secondary Education	(1969-70):	658.3	(1979-80):	960.0
- Secondary Education Graduates	(1969-70):	143.3	(1979-80):	210.0
- Ratio Secondary Education Graduates to total enrolments (in %)	(1970):	21.8	(1980):	21.8
- New Entrants universities	(1970-71):	62.7	(1980-81):	91.8
- Ratio of New Entrants in universities to Secondary Education Graduates (in %)	(1970):	43.7	(1980):	43.7
- Ratio of university drop-outs and Graduates to total enrolments (in %)	(1970):	27.4	(1970-80):	27.4

YUGOSLAVIA

Table A

ENROLMENT FORECASTS (YEAR 1980) (1)

Level of Education	Enrolments (in thousands)				Average annual rate of growth		
	1960/61	1964/65	1969/70	1980/81	1960/69	1964/69	1969/80
I. Primary Education (2)	2,764.4	2,972.2	2,853.1	3,225.0	0.8	- 0.8	1.3
II. Secondary Education	334.6	542.3	657.7	1,035.0	7.8	4.0	4.2
General	79.7	161.6	184.1	290.0	9.7	2.7	4.2
Technical and vocational	115.6	198.2	197.5	745.0	6.2	-	4.2
Skilled workers	139.3	182.5	276.1		3.1	8.7	
III. Non-University Level Higher Education	31.5	63.1	77.9	120.0	10.6	4.3	4.0
IV. University	108.9	107.4	161.8	300.0	4.5	8.5	5.8

1) Teachers' colleges are not included.

2) Eight years of studies

YUGOSLAVIA

Table B

PRIMARY AND SECONDARY EDUCATION

STRUCTURE OF ENROLMENTS BY AGE GROUP

Level of Education	1970 -71		1980-1981
	Enrolments (thousands)	%	Enrolments (thousands)
I. Primary Education	2,834.6	100.0	3,225.0
6 years old	69.5	2.5	80.0
7 to 14	2,696.7	95.1	3,070.0
15 and over	68.4	2.4	75.0
II. Secondary Education	679.3	100.0	1,035.0
14 years and less	32.5	4.9	60.0
15 - 18	610.1	89.8	920.0
19 and over	36.7	5.4	55.0
III. Higher Education (1)			
(18 years and less)	20.7		35.0

1) Including teachers' colleges.

YUGOSLAVIA

Table C

PRIMARY AND SECONDARY EDUCATION
ENROLMENT RATIO FORECASTS FOR THE YEAR 1981

Thousands

Level of Education / Age group	6	7-14	15-18	19-23	Total
Primary	80	3,070	75	-	3,225
Secondary	-	60	920	55	1,035
Higher (1)	-	-	35	..	..
Total		3,130	1,030	..	..
Population 1981 (2)		3,130	1,470	..	..
Enrolment ratio 1981		100	70	..	..
Enrolment ratio 1971		94	44	..	..

1) Including teacher's colleges.

2) Table F.

YUGOSLAVIA Table D

NON-UNIVERSITY LEVEL HIGHER EDUCATION ENROLMENT FORECASTS (1970-1980)

Thousands

Year	Enrolments (b+c)-(d+e) (a)	Enrolments Previous Year (b)	New Entrants (c)	Drop-outs Previous Year (d)	Graduates Previous Year (e)
1970-71	81.1	77.9	45.6	26.7	15.8
1971-72	84.3	81.1	47.4	44.2	
1972-73	87.6	84.3	49.2	45.9	
1973-74	91.0	87.6	51.1	47.7	
1974-75	94.5	91.0	53.1	49.6	
1975-76	98.1	94.5	55.1	51.5	
1976-77	102.0	98.1	57.4	53.5	
1977-78	106.0	102.0	59.6	55.6	
1978-79	110.1	106.0	61.9	57.8	
1979-80	114.4	110.1	64.3	60.0	
1980-81	119.0	114.4	66.8	62.2	

YUGOSLAVIA Table E

UNIVERSITY LEVEL HIGHER EDUCATION
ENROLMENT FORECASTS (1970-1980)

Thousands

Year	Enrolments (b+c)-(d+e) (a)	Enrolments Previous Year (b)	New Entrants (c)	Drop-outs Previous Year (d)	Graduates Previous Year (e)
1970-71	180.1	161.8	62.7	30.0	14.4
1971-72	195.9	180.1	65.1	49.3	
1972-73	209.8	195.9	67.6	53.7	
1973-74	222.5	209.8	70.2	57.5	
1974-75	234.4	222.5	72.9	61.0	
1975-76	245.9	234.4	75.7	64.2	
1976-77	257.2	245.9	78.7	67.4	
1977-78	268.5	257.2	81.8	70.5	
1978-79	279.9	268.5	85.0	73.6	
1979-80	291.5	279.9	88.3	76.7	
1980-81	303.5	291.5	91.8	79.8	

YUGSOLAVIA Table F

FORECASTS OF POPULATION AT SCHOOL AGE(1)

Thousands

Age	1971	1980
6		
7		
8		
9		
10		
11		
12		
13		
14		
7 - 14	3 100	3 130
15		
16		
17		
18		
15 - 18	1 600	1 470
19		
20		
21		
22		
23		
19 - 23	1 850	1 860

1) Estimates based on population projections for 1981, found in the Yugoslav demographic statistics, Demografska Statistica, 1967.

Appendix III

FORECASTS OF CURRENT EDUCATIONAL EXPENDITURE FOR THE YEAR 1980

NOTES ON TABLES A-E

In this Appendix an attempt has been made to work out forecasts of current educational expenditure for the period 1970-1980, taking into account only two of the main factors:

- the changes forecast in enrolments by educational level over the same period (see Table 16 and Appendix II);
- an assumed improvement(1) in the pupil/teacher ratio.

The lack of up-to-date information for most of the countries has not permitted the elaboration of estimates of investment expenditure for the same period.

Table A, on current public educational expenditure (year 1969-70), is based on official sources of information.

Table B (expenditure on teachers' salaries per pupil) was calculated on the basis of the data provided in Table A and pupil/teacher ratios.(2) Estimates of the average annual teacher salary cost per pupil(3) in the private sector (for

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1) The assumption here is that pupil/teacher ratios will not be higher in 1980 than the present less favourable ratios prevailing in the advanced Member countries.

2) These ratios were calculated from data on pupils and teachers in public and private schools, published in the educational statistical yearbooks of the countries concerned. Separate data for part-time staff were not available in many cases. However, the risk of error is serious only in secondary technical education where a large number of such staff is employed; for Greece and Yugoslavia, part-time personnel in technical education have been converted into full-time professor equivalents.

3) Which results from the division of the average annual teacher salary by the number of pupils per teacher.

which data were not available) were made on the basis of pupil/teacher ratios in the private schools and the assumption that the yearly average of teachers' salaries in the private schools was the same as in the public sector.(1) The same approach was applied for estimating future expenditure on salaries per pupil (year 1980).

The estimates in Table C (current private educational expenditure) and in Tables D and E (increase foreseen in expenditure) were based on the costs per pupil as calculated in Table B and on enrolment data as shown in Table 16 (and more analytically by country in Appendix II - "Enrolment Forecasts for 1980").

The results of these estimates are summarised in Table 18. All expenditure forecasts for 1980 are expressed in 1969 prices.

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1) For Spain and Turkey a breakdown of expenditure on teachers' salaries by educational level was not available. Therefore, *total* current educational expenditure *per teacher* was taken as a basis for the calculations.

Table A

CURRENT PUBLIC EXPENDITURE ON EDUCATION(1)

(Year 1969-70)

Country and Level of Education(2)	Enrolments in public schools (thousands)	Expenditure in millions of national currencies		
		Teachers' salaries	Other current	Total
I. Greece				
Primary	880.9	1,900	..	..
Secondary General	383.6	904	..	..
Vocational and technical	28.9	100		
University	73.6	460	..	..
Other current expenditure	-	-	..	..
Total	-	3,364	836	4,200
II. Portugal				
Primary	937.8	1,305	87	1,302
Secondary General	144.7	630	135	765
Vocational and technical	126.1	580	109	689
University	42.8	182	159	341
Other current expenditure	-	-	301	301
Total	-	2,697	791	3,488
III. Spain				
Primary	2 737.5			13,630
Secondary General	441.3			2,916
Vocational and technical	130.8			1,002
University	194.6			2,457
Other current expenditure	-			1,400
Total	-	..	..	21,405(3)
IV. Turkey				
Primary	4,880.0			1,039
Secondary	873.6			487
Vocational and technical	153.1			189
All higher	97.0			553
Other current expenditure	-			140
Total	-			2,408
V. Yugoslavia				
Primary	2,853.1	2 627	612	3,239
Secondary General	184.1	261	62	323
Vocational and technical	473.6	797	413	1,210
All higher	239.7	637	285	922
Other current expenditure	-	-	66	66
Total	-	4,322	1,438	5,760

1) Expenditure on teachers' colleges, pre-primary and adult education is not included.

2) Countries' definitions.

3) From a total amount of 23,505 million pesetas, an amount of 2,100 million was deducted as estimated expenditure on public pre-primary education and teachers' colleges.

Source: For Greece, Portugal and Turkey, the replies of the national authorities to the Secretariat questionnaire. For Spain, La Reforma Educativa en Marcha, Ministero de Educacion y Ciencia, Madrid, 1971, p. 197. For Yugoslavia, Statisticki Godisnjak Jugoslavije, 1971, p. 244.

Table B

EXPENDITURE ON TEACHERS' SALARIES PER PUPIL
(Year 1969-70)

In National Currenci

Country and Level of Education(1)	Yearly average of teachers' salaries(2)	Public Sector		Private Sector		Average Public and Private		Improved P/T rat for both Sector	
		Pupil/ teacher ratio	Expend. per pupil	Pupil/ teacher ratio	Expend. per pupil	Pupil/ teacher ratio	Expend. per pupil	Pupil/ teacher ratio	Expend per pupil
I. **Greece**									
Primary	72,690	33.7	2,157	26.9	2,700	33.1	2,196	28	2,596
Secondary General	77,310	32.8	2,357	23.0	3,360	31.2	2,478	20	3,865
Vocational and technical	70,930	20.5	3,460	32.9	2,156	27.9	2,542	17	4,172
University	167,500	26.8	6,250	-	-	26.8	6,250	15	11,167
II. **Portugal**									
Primary	47,190	33.9	1,392	24.9	1,895	33.3	1,417	28	1,685
Secondary General	78,372	18.0	4,354	13.7	5,720	15.8	4,960	20	3,919
Vocational and technical	74,784	16.4	4,560	11.8	6,338	15.7	4,763	17	4,399
Higher	100,772	23.7	4,252	6.6	15,684	20.1	5,013	15	6,718
III. **Spain**									
Primary	(160,854)	32.3	4,980	35.6	4,518	33.3	4,830	28	5,745
Secondary General	(165,911)	25.1	6,610	24.1	6,884	24.4	6,800	20	8,296
Vocational and technical	(120,262)	15.7	7,660	15.7	7,660	15.7	7,660	17	7,074
University	(173,000)	13.7	12,625	7.9	21,900	13.3	13,000	15	11,500
IV. **Turkey**									
Primary	(8,540)	40.1	213	16.2	527	39.8	215	28	305
Secondary General	(17,270)	31.0	557	14.1	1,225	29.3	589	20	863
Vocational and technical	(16,300)	13.2	1,235	..	..	13.1	1,237	17	959
Higher	(84,930)	14.8	5,700	27.8	3,055	17.7	4,798	15	5,662
V. **Yugoslavia**									
Primary	22,450	24.4	920	-	-	-	-	28	802
Secondary General	25,949	18.3	1,418	-	-	-	-	20	1,293
Vocational and technical	37,867	22.5	1,683	-	-	-	-	17	2,227
Higher	41,450	15.6	2,657	-	-	-	-	15	2,763

1) Countries' definitions.

2) For Spain and Turkey: yearly average of total current expenditure per teacher (yearly average of teachers' salaries plus "other current expenditure"); therefore, expenditure per pupil is total current expenditure per pupil.

Table C

ESTIMATES OF PRIVATE CURRENT EDUCATIONAL EXPENDITURE

(Year 1969-70)

Country and Level of Education(1)	Enrolments in private schools (thousands)	Expenditure in Millions of National Currencies		
		Teachers' salaries	Other Current Expenditure(2)	Total
I. **Greece**				
Primary	67.2	181		
Secondary General	52.9	178		
Vocational and technical	74.3	160		
University	-	-		
Total		519	131	650
II. **Portugal**				
Primary	51.9	98		
Secondary General	114.2	652		
Vocational and technical	16.4	104		
Higher	3.2	50		
Total		904	266	1,170
III. **Spain**				
Primary	1,051.6			4,751
Secondary General	953.1			6,560
Vocational and technical	208.7			1,599
Higher	7.9			175
Other Current Expend.				825
Total				13,910
IV. **Turkey**				
Primary	26.0			14
Secondary General	42.4			52
Vocational and technical	1.3			2
Higher	50.0			153
Other Current Expend.				13
Total				234

1) Countries' definitions.

2) "Other Current Expenditure" as a percentage of "Total Current Expenditure" is assumed to be the same as in the public schools.

Table E

ESTIMATED INCREASE IN CURRENT EDUCATIONAL EXPENDITURE ON THE ASSUMPTION OF AN IMPROVED PUPIL/TEACHER RATIO (1969-1979)

Country and Level of Education	Estimated increase in enrolments (thousands)	Expenditure in National Currencies (in millions)			Expenditure on teachers' salaries per pupil(2)
		Teachers' salaries	Other current expenditure(1)	Total	
I. **Greece**					
- First eight years of schooling and Upper Secondary General	148	572			3,865 (3)
- Upper Secondary Vocational and technical	69	288			4,172
- Non-university level Higher Education	28	215			7,670 (4)
- University	31	345			11,167
Total		1,420	355	1,775	
II. **Portugal**					
- First eight years of schooling and Upper Secondary General	170	665			3,919 (3)
- Upper Secondary Vocational and technical	42	185			4,399
- Non-university level Higher Education	15	85			5,558 (4)
- University	51	340			6,718
Total		1,275	375	1,650	
III. **Spain**					
- First eight years of schooling and Upper Secondary General	924			7,665	8,296 (3)
- Upper Secondary Vocational and technical	139			985	7,074
- Non-university level Higher Education	77			715	9,287 (4)
- University	338			3,890	11,500
- Other expenditure				1,000	
Total				14,255	
IV. **Turkey**					
- First eight years of schooling	3,434			2,005	584 (5)
- Upper Secondary General	258			223	863
- Upper Secondary Vocational and technical	210			201	959
- All Higher Education	128			725	5,662
- Other current Expenditure				189	
Total				3 343	
V. **Yugoslavia**(6)					
- First eight years of schooling	372	300			802
- Upper Secondary General	106	140			1,298
- Upper Secondary Vocational and technical	271	600			2,227
- All Higher Education	180	500			2,763
Total		1,540	760	2,300	

1) "Other current expenditure" as a percentage of "total current expenditure" is assumed to be the same as in the public sector.

2) See Table B of this Appendix.

3) Most of the increase in enrolments is expected to occur in secondary education; therefore the average expenditure per pupil in secondary education was applied here.

4) Average expenditure per student of university and vocational education

5) Average expenditure per pupil in primary (first fi years of schooling) and secondary education (the three subsequent years of studies).

6) Period 1969-1980.

Table D

PUBLIC AND PRIVATE CURRENT EDUCATIONAL EXPENDITURE ON THE ASSUMPTION OF IMPROVED AVERAGE PUPIL/TEACHER RATIOS

(Year 1969/70)

Country and Level of Education(1)	Total Enrolments (thousands)	Expenditure in Millions of National Currencies		
		Teachers' Salaries	Other Current Expenditure(2)	Total
I. **Greece**				
Primary	948.1	2,460		
Secondary General	436.5	1,687		
Vocational and technical	103.2	430		
University	73.6	823		
Total		5,400	1,350	6,750
II. **Portugal**				
Primary	989.7	1,668		
Secondary General	258.9	1,015		
Vocational and technical	142.5	628		
University	46.0	309		
Total		3,620	1,060	4,680
III. **Spain**				
Primary	3,789.1			21,768
Secondary General	1,394.4			11,568
Vocational and technical	339.5			2,402
University	202.[illegible]			2,330
Other Current Expend.				2,722
Total				40,790
IV. **Turkey**				
Primary	4,907.0			1,497
Secondary General	916.0			790
Vocational and technical	154.4			148
All Higher Education	147.0			832
Other Current Expenditure				196
Total				3,463
V. **Yugoslavia**				
Primary	2,853.1	2,290		
Secondary General	184.1	240		
Vocational and technical	473.6	1,055		
All Higher Education	239.7	660		
Total		4,245	1,435	5,680

1) Countries' definitions.

2) "Other Current Expenditure" as a percentage of "Total Current Expenditure" is assumed to be the same as in the public schools.

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